### **WORKING BETA**

HOW TO TRIGGER COLLABORATION AND CROSSDEPARTMENTAL WORK IN BIG COMPANIES

the case study of Volkswagen AG

A thesis project by Ludovica Vando

in collaboration with

### **VOLKSWAGEN**

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Once you have an innovation culture, even those who are not scientists or engineers - poets, actors, journalists - they, as communities, embrace the meaning of what it is to be scientifically literate.

They embrace the concept of an innovation culture.

They vote in ways that promote it.

They don't fight science and they don't fight technology.

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# ABSTRACT

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# INTERNET AND THE WORLD WIDE WEB

FROM THE ORIGINS OF INTERNET TO THE BOOM OF "2.0"

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nternet (from the english expression 'interconnected networks') is a worldwide network of computer networks with public access, currently representing the main means of mass communication, which provides the user a wide range of potentially informative content and services.

It is a global interconnection between networks of different nature and extent, made possible thanks to a common network protocol suite called TCP/IP.

The name comes from the two main protocols, TCP and IP, which represent the common language with which the computer connected to the Internet (hosts) interconnect and communicate between each other regardless of their hardware and software architecture, guaranteeing interoperability between systems and different subnets.

The advent and spread of the Internet represented a real technological and sociological revolution (together with other inventions such as mobile phones and GPS) as well as one of the engines of world economic development within the field of Information and Communication Technology (ICT) and beyond.

### 1.1

The history of

Internet

The origin of the Internet dates back to the sixties, under initiative of the United States, who during the Cold War developed a new system of defense and counterintelligence.

The first scientific publication in which a network of computers worldwide Public Access is theorized, is the *Online computer communication* (August 1962) scientific publication of the American Joseph CR Licklider and Welden E. Clark.

In the publication Licklider and Clark, researchers from the Massachusetts Institute of Technology, also give a name to their theorized network: 'Intergalactic Computer Network'.

In 1991 the government of the United States of America finally issues the *High Performance computing act*, a law that for the first time allows to expand an Internet network - until then state-owned computer network world destined to the scientific world - thanks to private initiative work and for purposes of commercial exploitation. This commercial exploitation has immediately been

put in place also by other countries. The ARPANET project is considered the ancestor and precursor of the Internet and was funded by DARPA Defense Advanced Research Projects Agency, an agency employed by the US Department of Defense, DoD.

In a note dated April 25, 1963, Joseph

C.R. Licklider had expressed his intention to connect all computers and time-sharing systems in a continental network. Having left ARPA for a place at IBM, his successors devoted themselves to the ARPANET project. The contract was awarded to the company from which Licklider, the Bolt, Beranek and Newman (BBN) came, who used the Honeywell minicomputer as support.

The network was physically built in 1969 by connecting four knots: University of California Los Angeles, the SRI of Stanford, the University of California, Santa Barbara, and the University of Utah. The bandwidth was 50 Kbps. The important *Request for Comments* were introduced in the meetings set up to define the characteristics of the network, and

today they still are the fundamental documents for everything related to computer network protocols and their developments. Today's super-network is the result of the extension of this first network, created under the name ARPANET.

The first knots were based on a client/server architecture and did not support mail therefore direct (host-to-host) connections.

The running applications were mainly Telnet and File Transfer Protocol programs (FTP).

The mail service mail was invented by BBN's Ray Tomlinson in 1971, who resulted the program from other two: the SENDMSG for internal messages and CPYNET, a program for file transfer.

The following year ARPANET was introduced to the public.

It immediately became popular also thanks to the contribution of Larry Roberts who had developed the first electronic mail management program, RD.

In a few years ARPANET expanded overseas simultaneously to the advent of the first packages

submission service with feed: *Telenet* of BBN. The enstablishment of the network CYCLADES begins in France under the direction of Louis Pouzin, while the Norwegian network NORSAR allows the connection of ARPANET with the University College of London. The expansion continued so quickly that on March 26, 1976 Queen Elizabeth II sent an email to the headquarters of the Royal Signals and Radar Establishment

*Smileys* were established in April 12, 1979, when Kevin MacKenzie suggested to introduce a symbol in the email to indicate moods.

Everything was ready for the crucial transition to the Internet, including the first telematic virus: while experimenting with email's speed of propagation, ARPANET was completely blocked due to an error in the header of the message: it was the 27th of October 1980.

By defining the Transmission Control Protocol (TCP) and the Internet Protocol (IP), DCA and ARPA gave officially way to the Internet as the set of interconnected networks using these protocols.

Financed by the United States Department of Defense, Italy was the third country in Europe to join the local network, after Norway and England. The connection came from the University of Pisa, which hosted one of the most advanced researcher's group in Europe. Some members of the group had worked in contact with those who would later be considered the fathers of the Internet, Robert Kahn and Vinton Cerf. It was Kahn himself who convinced his superiors to finance the purchase of the necessary technologies (Butterfly Gateway) for the group of Pisa. The connection took place in April 30, 1986.

In 1991 at Ginevra's CERN (European Organization for Nuclear Research, one of the world's largest and most respected centres for scientific research), the researcher Tim Berners-Lee defined the Web protocol HTTP (HyperText Transfer Protocol), a system that allows hypertextual and non-sequential reading of documents by jumping

from one point to another through the use of cross-references (links or, more properly, hyperlinks). The first browser with similar characteristics to those of today, *the Mosaic*, was released in 1993.

It profoundly he revolutionized the way we do research and communicate on the network.

This is how the World Wide Web was born.

In the World Wide Web (WWW), the available resources are organized in a libraries system, or pages, that can be accessed using special programs called *Web Browsers*. With web browsers you can navigate viewing files, text, hypertext, sounds, images, animations, movies.

In 1993 CERN decides to make the technology behind the World Wide Web public, so that it can be freely implementable by anyone. This decision is followed by an immediate and broad success of the World Wide Web because of the features offered, of its efficiency and, not least, of its ease of use.

This success is the beginning of the exponential growth of Internet that in only few years will lead the network of networks to change human society by revolutionizing the way people relate to each other to how they work, so much so that in 1998 would talk about a 'New Economy'.

The ease of use associated with the HTTP and the browser, coinciding with a wide spread of computer for personal use also, have opened Internet access to a mass of millions of people, even outside the mere informatic field, with an exponential growing progression.

If before 1995 Internet was therefore relegated to being a network dedicated to communications within the scientific community and among governative and administrative associations, from that year on we witnessed and are still witnessing a constant dissemination of access to network by the computers of private users up to the boom of the 2000s.

With the beginning of the new century, in fact, hundreds of millions of computers were connected to the network parallelly a. to the pushed diffusion of PC in the world

b. to the increase of content and services offered by the Web

c. to increasingly more usable, more accessible and user-friendly surfing modalities

d. to a raise in terms of data transfer speed to a higher speed transmission passing from the ISDN and V.90 connections to the current and well-known broadband connections via DSL systems.

Until the year 2000 there were fears of having to re-engineer the entire Internet from scratch (rumors of a possible Internet2) because the number of host addressable through IP protocol was close to being exhausted (IP shortage) because of the number of actually connected hosts (in addition to the necessary redundancy and losses for social reasons).

The problem has been partially avoided (or postponed) with the use of the NAT/Gateway technique through which a corporate network does not need to a wide range of fixed IP addresses, but can use a

reduced one, achieving even a good economic saving.

Today, as a permanent solution, we should place our hope in the possibility to migrate in a non traumatic way to version 6.0 of IP (IPv6), which will release about 340 billion billion billion billion addressable IP numbers.

The existing converging processes in the fields of ICT (information and communication technologies), media and communications. indicate furthermore the increasingly more propable full integration of Internet's network with the telephone's network already with the VoIP (Voice over IP) technology, as well as the parallel fruition of information contents, typical of other media such as television and radio, into one big network. In fact, if on the one hand the origin of the network has been characterized by data exchange such as textual content and still images, on the other hand the future evolution of network goes towards the increasing use of multimedia content such as

audio-video (eg. streaming, Web TV, IPTV, Web radio). The consequence is a great increase of the overall network traffic and its load on the internal commutation systems (router) and the server, also due to the growing number of networked users in the world. The most widely adopted solution to this problem is the decentralization of resources. meaning the distributed network systems (eg. Content Delivery Network) able to handle the increased traffic. whereas to solve the increase of bandwidth needed on the links, there are more efficient data compression techniques to mention, that have allowed the spread of more and more sophisticated and heavy services. Under this viewpoint the evolution of the network from the services side also requires the development of an increasingly more broadbanded web access infrastructure with the enstablishment of the so-called Next Generation Network, to

cover the expected traffic increase

and the fruition of these services

by the end user. Nevertheless,

the same operators who should invest in the construction of these infrastructures require a sure return on investment, a benefit that would be far more in favor of the big networks or service providers and network content (Google, Youtube, Facebook, Twitter etc ...) thus raising awareness on the problem concerning the so-called net neutrality.

The global nature with which Internet was conceived led to the fact that today a huge variety of processors, not only computing devices in the strict term but sometimes even invisibly incorporated (embedded) in electrical and other kinds of devices, have the ability to connect to Internet among its functions and, through this, to some upgrade service, to the distribution of information and data:

from the refrigerator, the TV, the alarm system, the owen, the camera: each processor is now able to communicate via the Internet. In this sense, therefore, a further development of the Network,

advocated by some, could be the extension of connectivity to tagged objects of the real world, creating the so-called *Internet of things*.

accuracy and economic benefit.[3][4][5] system but is able to interoperate within (M2M) and covers a variety of protocols, domains, and applications.[10] The interconnection of these embedded devices (including smart objects), is expected to usher in automation in nearly all fields, while also enabling advanced applications like a Smart Grid,[11] and expanding to the areas such as Smart city.[12][13]

flow the data between other devices.[16] that utilize Wi-Fi for remote monitoring. to expand into, IoT is also expected to 1.2

The WWW World Wide Web

The World Wide Web (WWW or simply Web) is an Internet service that allows you to navigate and take advantage of a vast collection of content (multimedial and not) and additional services accessible to all or to a selected part of Internet users. The Web was initially implemented by Tim Berners-Lee while he was a researcher at CERN and is based on ideas of the same Berners-Lee and his colleague, Robert Cailliau.

Nowadays, the standards on which it is based are maintained by the World Wide Web Consortium (W3C) and in constant evolution.

The Web was born on August 6, 1991, day in which Berners-Lee put the first website online on the Internet. Initially only used by the scientific community, on April 30, 1993 CERN decided to make the technology behind the Web, public. This decision is followed by an immediate and widespread success of the Web by virtue of the possibility for anyone to become a publisher, its efficiency and, not least, its simplicity.

The success of the Web gave start to

Internet's exponential, unstoppable and still ongoing growth, as well as to the so-called era of the Web.

The Web is an electronic and digital space of Internet destined to the publishing of multimedial content (texts, images, audio, video, hypertext, hypermedia, etc.) as well as a tool to implement particular services such as the downloading of softwares (programs, data, applications, video games, etc.). This electronic space and such services are made available through special Internets' computer called Web server.

Anyone with a computer, an Internet connection, the appropriate programs and the so-called web space (memory portion of a web server for the storage of web content and for the implementation of web services) may, in compliance with the laws applicable in the country of residence of the web server, publish multimedia content on the Web and provide special services through the Web.

Not all content and services of the Web, however, are available to anyone as the owner of the web space, or those who have the permission to use it, can only make it available to certain users, with or without charge, using the account system.

The main content of the Web consists of text and graphic content represented in a restricted set of standards defined by the W3C. Such contents are those that all web browsers should be able to use autonomously, without an additional software.

The published Web content can be however of any type and of any standard. Some of these contents are published to be used through the web browser and - as not one of the standards defined from the W3C set - this must be integrated with the so-called plugin softwares in order to be able to use them through the web browser. These softwares integrate the functionality of a program and are normally downloadable from the Web. The rest of the Web contents can be used with autonomous programs. For example, it may

be a file executable on the operating system you are using or a text document in Microsoft Word format

The Web content is organized in so-called Websites which, in turn. are structured into Web Pages, presented as textual compositions and/or graphics displayed the computer screen by the web browser. The web pages, even belonging to different sites, are interconnected in a non-sequential way through links. Links are textual and/or graphical parts of a web page that allow access to another Web page, to download special content or access to special features by clicking on it with the mouse, thus creating a hypertext.

All websites are identified by the socalled *web address*, a sequence of unique characters called URL, that allow traceability in the Web.

There is no in real time updated index of the website's content, so that over the years the so-called *search engines* were successfully born. These are Web sites with which you can automatically search

for web content, based on keywords entered by the user and the web portals. Web portals are websites from which you can access large amounts of web content, previously selected by the web's portal editors through the use of search engines or on the recommendation of the websites' editors. In addition to the publication of multimedia content on the Web can offer services services implemented special by the users of the Web. The implementable services are countless, in fact only limited by the speed of the telecommunications line with which the user and the service provider are connected and by the of their computer's calculation power (download. streaming, web mail, web chat, etc). The Web is implemented through a set of standards, the main of which are the following:

•HTML (and its derivatives): the markup language with which the web pages are written and described

•HTTP: network protocol belonging to the application layer of the model

ISO / OSI on which the Web is based •URL: the identification scheme. and therefore traceability, of the content and the services of the Web. The peculiarity of the Web's content is that of not being stored in one singlecomputer but to be distributed across multiple computers, feature that creates efficiency, since not tied to a particular physical location. This characteristic is achieved by the network protocol HTTP which allows you to see the Web's content as a single set of contents even if they physically reside on a multitude of computers around the planet. The vision of a web page starts by typing the URL into the Web browser field or by clicking on a hyperlink in a previously displayed website or other resource such as an email. The web browser then begins a series of communication messages with the web server hosting that page, with the purpose of displaying them later on on the user terminal. First, the servername portion of the URL is resolved into an IP address using the global and distributed database known as

Domain Name System, DNS. This IP address is necessary to send and receive packets from web server. At this point the browser requests the information by sending a request to that address. In case of a typical Web page, the HTML text of a page is requested first and immediately interpreted by the web browser, which later requires eventual images or files that will be used to form the final page. Upon receipt of the required files from the web server the browser formats the page on the screen following the HTML, CSS, or other web languages' guidelines. Every image and other resources are incorporated to create the web page that the user will see. Crucial in the evolution of the Web have become the concepts of accessibility and usability in favor of all types of users, in relation to the production, organization and implementation of the content according to specific requirements, generally in common with the evolutionary guidelines of all the hardware and software products in the field of ICT.

The first proposal for a hypertext system can be traced back to the studies of Vannevar Bush, then published in the article *As We May Think* of 1945.

Initially standards and protocols only supported the management of static HTML pages, such as  $\stackrel{\checkmark}{\geq}$ previously prepared hypertextual, viewable and, above all, navigable files using appropriate applications (web browser). In order to overcome the limitations of the initial project, tools capable of generating dynamic HTML pages (eg. using data extracted from a CGI database) were immediately defined. The first solution of this type were the CGI (Common Gateway Interfaces). Through a CGI you can request to a web server to invoke an external application and to present the result as any HTML page.

Two roads were pursued to give the web more interactivity and dynamism. On one side browser's functionalities were increased thanks to an evolution of HTML language and the possibility to interprete scripting languages (such as JavaScript). Second, the server's processing quality was improved through a new generation of languages integrated with the Web Server (such as JSP, PHP, ASP, etc.), transforming it in what are now more properly known as Application *Server.* The spread of these solutions has allowed us to start using the web as an application platform. Today it finds its highest expression in the Web Service, for which implementation and dissemination the entire worldwide industry of enterprise management softwares (from SAP to Oracle), up to Open Source communities, are working. The use of web-service within SOA's Architecture) (Service-Oriented architecture of integration will allow also to small enterprises to manage their business processes without much effort.

The purpose of Web Services is to limit the implementation activities as much as possible, allowing you to access computer software made available on the network, to assemble them according to your needs and to pay them only for the

actual use you make of them. This software is also known as *pay-per-use*, *on-demand*, *just-in-time*, *tap on software*, etc. It is clear, therefore, that the Web Services and their success have and will have a structural and inherent bond with business processes they will have to support in a new organization based on processes.

Despite all these developments, the web remains, still and above all, a giant library of static on-line HTML pages. However, if on one hand HTMI has contributed to the success of the web with its simplicity, on the other it has the great limitation of dealing exclusively with the formatting of documents, ignoring completely the content's structure and meaning. This creates considerable difficulties in finding and reusing information. To realize this, we simply need to run a search using one of the many engines available on the net. The result will be that only a small percentage of the thousands of documents listed, is actually interesting for the intended research.

The answer to this problem has come, once again, by Berners-Lee, who in 1998 set the standard XML (eXtensible Markup Language), a meta derived from SGML (Standard Generalized Markup Language), which allows the creation of new marking languages. His innovative feature is the ability to add semantic information in the content by establishing appropriate tags. The main goals of XML, declared in the first official specification (Oct. 1998), are few and explicit: •use of language on the Internet ease of documents creation support of multiple applications clarity and comprehensibility. With these simple features XML provides a common way to represent data, so that the software programs are able to perform better searches, display and manipulate information hidden in the contextual darkness XML characteristics, however, have a very important shortcoming: they define no univocal and shared mechanism to specify relationships between information expressed on web for an automatic processing

(eg. more documents talking about the same topic, person, organization, object), making information sharing very difficult. The solution to the problem comes from Berners Lee's W3C (World Wide Web Consortium), through the formalization of the semantic web. W3C considers the ideal evolution of the web from the machine-representable to machineunderstandable. The idea is to create documents that can not only be read and appreciated by human beings, but be also accessible and interpretable by automated agents to search for content. For this purpose some languages have been defined, such as Resource Description Framework (RDF) and Web Ontology Language (OWL), both based on XML, that allow to express the relationships between information referring to the logic of predicates mutated by artificial intelligence. These standards are already available but they continue to be developed further, together with formalism and tools, to provide the web with the capacity

of inference.

This process is only seemingly technical, it has in fact the goal to achieve a shared web intelligence that is promising soon a more efficient use of websites and in the longer term, a genuine transformation of the nature of software and services.

The huge interest in these technologies is explained by the fact that all (users, software developers and producers, small and large services and companies) will benefit from a full dissemination of these standards and have already started. The formation of a wide semantic network in the body of the web is, in fact, the key condition for the launch of a new way of understand and use the Web and its endless opportunities.

### 1.3

Web 2.0 Challenges and Opportunities

Web 2.0 describes World Wide Web sites that emphasize usergenerated content, usability, and interoperability. It is the set of all those online applications that allow a high level of interaction between website and user such as blogs, forums, chats, wikis, media sharing platforms like Flickr, Youtube, Vimeo, social networks such as Facebook. Myspace, Twitter, Google+, Linkedin, Foursquare, etc. obtained typically through appropriate programming Web techniques pertinent to the Web's dynamical paradigm and in contrast with to the so-called static Web or Web 1.0.

The term was popularized by Tim O'Reilly and Dale Dougherty at the O'Reilly Media Web 2.0 Conference in late 2004, though it was first coined by Darcy DiNucci in 1999. It emphasizes the differences from the so-called Web 1.0, widespread until the nineties and mainly composed of static websites without any possibility of interaction with the user except from the normal screen navigation, the use of e-mail and search engines. Specific

programming technologies often used for Web 2.0 applications, such as AJAX (Gmail uses this technique extensively) or Adobe Flex. An example would be social commerce, an evolution of *E-Commerce* under an interactive point of view, which enables greater customer participation, through blogs, forums, feedback systems, etc.

Skeptics contend that the term Web 2.0 does not have a real meaning and would depend mainly on trying to convince the media and investors about the fact that new opportunities related to some platforms and technologies are rising. Through the use of scripting languages such as JavaScript, of dynamic elements and of style sheets (CSS) for the graphical aspects, major real web applications can be created. They are far from the old concept of simple hypertext and traditional computer applications. From a point of view of network technology, Web 2.0 is quite

equivalent to the Web 1.0. The big difference lies in the approach of users with the Web, which basically goes from simple consultation (even though supported by efficient search, selection and aggregation tools) to the opportunity to contribute populating and powering the Web with their own content.

First of all. Web 2.0 has a philosophical approach to the network characterized bv social dimension, the sharing, the authorship, in comparison to a mere fruition. Although from the perspective of many technological tools the network may appear unchanged, it is the shift in terms of usage of the network, of the user's ability to enjoy and create or edit multimedia content that opens up new scenarios based on coexistence and collaboration.

Only thanks to these technological developments the central concept of sharing resources and skills among users has now become an affordable reality. The ability to access services at a low cost, capable to allow the non-experienced user to edit, is an important step towards a genuine

interaction and sharing in which the user's role is Central.

If before, the construction of a personal website required the mastery of HTML and programming elements, today with blogs anyone is able to publish their own content, even designing it with attractive graphics, without owning any special technical skills. If the first web communities were overwhelmingly consisting of computer scientists, today the situation is completely overturned. The main producers of blogs are writers, journalists, artists whose activities do not require a thorough knowledge of computers.

The Wiki technology (Wikipedia is its most famous application) is the content management's arrival point, as it implements all the paradigms. If before multiple applications were required to manage the information's life cycle (from intuition to fruition), today a same technology is supporting the entire process at its best. You can use the information in the place it was born. The techniques used until

recently to keep visitors longer on a website (*stickiness*, literally the stickiness of a site, meaning the ability to hold users glued to it) are giving way to other concepts of contact with the user

Who creates content nowadays, makes sure through *syndication technologies* (RSS, Atom, Tagging) that they can be fruible not only by visitors of that site but also by those of different channels.

An example of these new channels are *feeds*, a lists of elements with a title (eg. news of a newspaper, a newsgroup thread), allowing a link to informative content. The informative content can be updated and consulted frequently with special programs or even through browser, allowing you therefore to be always aware of the new content inserted in multiple sites without having to visit them directly.

This means the possibility of creating and sharing content on the Web, typical of the Web 2.0, is given by a set of tools that allow on-line use of the web as if it was a normal application. In practice, the second

generation Web is a Web where you can find those services that were previously offered as packages to be installed on individual computers. Examples of Web 2.0 are CKEditor and Writely, real word processors and format converters, or NumSum, a kind of spreadsheet. Also Google recently launched its suite of editor, called Google Docs & Spreadsheet, and Microsoft is going to release an online version of the Office suite. In addition to co-authoring of online content. Web 2.0 features the immediate publication of the content and its classification and indexing in the search engines, so that the information is immediately available for the community to benefit from, realizing quickly the life cycle of content management. For the publishing of Web content the masters (of today) are the blog provider such as Blogger, Wordpress and Splinder, but also Business platforms such as Microsoft Sharepoint Services that in version 3.0 enhances its collaboration features becoming the server part of Office 12.

## "

Web 2.0 is the business revolution in the computer industry caused by the move to the internet as platform, and an attempt to understand the rules for success on that new platform.

Chief among those rules is this: build applications that harness networks effects to get better the more people use them.

# **WEB 2.0**

### Web 2.0 are: rich user experience by way of use also be viewed as of Web 2.0

## **FOLKSONOMY**

find information (e.g. Tagging). Collections of tags created by many users free classification of information; allows users to collectively classify and within a single system may be referred to as "folksonomies".

## RICH USER EXPERIENCE & STANDARDS

essential platform for Web 2.0. Common interfaces for accessing content dynamic content, responsive to user input. Standards provide an and applications are the glue that allow integration across the many elements ofthe emergent web.

## **USER PARTICIPATION**

Every aspect of Web 2.0 is driven by participation. The transition to Web 2.0 was enabled by the emergence of platforms such as blogging, social networks, and free image and video uploading, that collectivelyallowed extremely easy content creation and sharing by anyone.

## **SOFTWARE AS A SERVICE & USER CONTROL**

Web 2.0 sites developed API to allow automated usage, such as by an app or mashup. Users can control the content they create, the data captured about their web activities, and their identity. This powerful trend is driven by the clear desires of participants.



## **OPENNESS & MASS PARTICIPATION**

Universal web access leads to differentiation of concerns from the traditional internet user base. The world of Web 2.0 has only become possible through a spirit of openness whereby developers and companies provide open, transparent access to their applications and content.

## MODULARITY

Web 2.0 is the antithesis of the monolothic. See the many components or modules that are designed to link and integrate with others, together building a whole that is greater than the sum of its parts.



## **DECENTRALIZATION**

Power and flexibility emerges from distributing applications and content Web 2.0 is decentralized in its architecture, participation, and usage. over many computers and systems, rather than maintaining them on centralized systems.

For marketers, Web 2.0 offers an opportunity to engage consumers. A growing number of marketers are using Web 2.0 tools to collaborate with consumers on product development, service enhancement and promotion. Companies can use Web 2.0 tools to improve collaboration with both its business partners and consumers.

Among other things, company employees have created wikis - Web sites that allow users to add, delete. and edit content - to list answers to frequently asked questions about each product, and consumers have added significant contributions. Another marketing Web 2.0 lure is to make sure consumers can use the online community to network among themselves on topics of their own choosing.[47]

Mainstream media usage of Web 2.0 is increasing. Saturating media hubs - like The New York Times, PC Magazine and Business Week - with links to popular new Web sites and services, is critical to achieving the threshold for mass adoption of those services.[48]

Web 2.0 offers financial institutions abundant opportunities to engage with customers.

Networks such as Twitter, Yelp and Facebook are now becoming common elements of multichannel and customer loyalty strategies, and banks are beginning to use these sites proactively to spread their messages.

In a recent article for Bank Technology News, Shane Kite describes how Citigroup's Global Transaction Services unit monitors social media outlets to address customer issues and improve Furthermore, products. the financial services industry uses Twitter to release "breaking news" and upcoming events, and YouTube to disseminate videos that feature executives speaking about market news.[49]

Small businesses have become more competitive by using Web 2.0 marketing strategies to compete with larger companies.

As new businesses grow and develop, new technology is used to decrease the gap between businesses and customers. Social networks have become more intuitive and user friendly to provide information that is easily reached by the end user. For example, companies use Twitter to offer customers coupons and discounts for products and services. [50] According to Google Timeline, the term Web 2.0 was discussed and indexed most frequently in 2005, 2007 and 2008. Its average use is continuously declining by 2-4% per quarter since April 2008.

The term Web 2.0 has been highly championed by bloggers and by technology journalists, culminating in the 2006 TIME magazine Person of The Year "YOU".[24] That is, TIME selected the masses of users who were participating in content creation on social networks, blogs, wikis, and media sharing sites. In the cover story, Lev Grossman explains:

a story about community and collaboration on a scale never seen before. It's about the cosmic compendium of knowledge Wikipedia and the millionchannel people's network YouTube and the online metropolis MySpace. It's about the many wresting power from the few and helping one another for nothing and how that will not only change the world but also change the way the world changes."

The Social Web consists of a number of online tools and platforms where people share their perspectives, opinions, thoughts and experiences. Web 2.0 applications tend to interact much more with the end user. As such, the end user is not only a user of the application but also a participant by:

- Podcasting
- Blogging
- Tagging
- Curating with RSS
- Social bookmarking
- Social networking
- Web content voting

Grossman, Lev. 2006. Person of the Year: You. December 25. Time.com DECEMBER 25, 2006 - JANUARY 1, 2007 PERSON OF THE YEAR You. 00:00/2 Yes, you. You control the Information Age. Welcome to your world.

The main Web 2.0 applications are: **Wikis** 

A wiki is a collaborative website that anyone within the community of users can contribute to or edit. A wiki can be open to a global audience or can be restricted to a select network or community. Wikis can cover a specific topic or subject area. Wikis also make it easy to search or browse for information. Although primarily text, wikis can also include images, sound recordings & films. Wikipedia http://en.wikipedia.org the free internet encyclopedia is the most well known wiki.



### Blogs

A blog is a contraction of the words web log. Blogs usually provide commentary or information on a particular issue, event or topic. In some cases, blogs can be about a particular person; an online, public,

personal diary. A blog is usually maintained by a single person or a small group of contributors. Visitors to the blog can comment on the entries made or respond to comments made by other visitors. Blogs are primarily text but can also be the form of photos or other images, sounds, or films.



### **Content Hosting Services**

Content hosting or content sharing sites allow users to upload content that they have created for others to view. Two of the most popular of these sites are YouTube www. youtube.com for videos and Flickr www.flickr.com for photographs. Users can also create an individual profile and list their favourite photos or videos. Users are able to rate and comment on the videos or photos posted and provide feedback to the creator and other users. Copyright

infringement is an issue for some of these services as many users do not upload original content.



### **Podcasting**

Podcasting is a way of making audio or video files available on the internet that can either be listened to or viewed on a PC or downloaded to a hand-held device such as an iPod or mp3 player. A podcast will be treated as a sound recording (audio podcasts) or a film (video podcasts, as known as vodcasts). Podcasts may also include images, including PowerPoint presentations. If there is a script or lecture notes for the podcast, that will be protected as a literary work. There may be multiple layers of copyright in a podcast, depending on the content of the podcast. If there is a presenter or a subject being interviewed, they will not only own copyright in their presentation or interview but they will have performers' rights. There will also be a separate copyright in the actual recording itself.

Each of these services will have copyright implications that need to be managed. The copyright issues will vary depending on the type of content that can be created or contributed and how users of the site will interact with the material on the site. There may also be other legal issues, such as privacy and defamation to consider.



### **Social Networking**

Social networking allows an individual to create a profile for themselves on the service and share that profile with other users with similar interests to create a social network. Users can choose to have public profiles which can be viewed by anyone or private profiles which

can only be viewed by people that the users allow. Users can usually post photographs, music and videos on their site. Popular social network services include Facebook www. facebook.com and MySpace www. myspace.com.



Humans suffer from information overload: there is much more information on any given subject than a person is able to access. As a result, people are force to depend upon each other for knowledge.

Know-who rather than know-what or know-why information has become most crucial. It involves knowing who has the needed information and being able to reach that person.

Strong ties involve time, emotional intensity, intimacy and reciprocation. People connected by strong ties tend to form clusters that

exhibit high levels of redundancy. Weak ties are acquaintances who are not part of your closest social cirle, and as such have the power to act as a bridge between your social cluster and someone else's.

"Whithin a Social Network, weak ties are more powerful than strong ties. They are indispensable to individuals' opportunities and to their incorporation into communities while strong ties breed local cohesion."

The popularity of the term Web 2.0, along with the increasing use of blogs, wikis, and social networking technologies, has led many in academia and business to append a flurry of 2.0's to existing concepts and fields of study,[36] including Library 2.0, Social Work 2.0,[37] Enterprise 2.0, PR 2.0,[38] Classroom 2.0,[39] Publishing 2.0,[40] Medicine 2.0,[41] Telco 2.0, Travel 2.0, Government 2.0,[42] and even Porn 2.0.[43] Many of these 2.0s refer to Web 2.0 technologies as the source of the new version in their respective disciplines and areas.

For example, in the Talis white paper "Library 2.0: The Challenge of Disruptive Innovation", Paul Miller argues the meaning of Web 2.0 is role dependent. For example, some use Web 2.0 to establish and maintain relationships through social networks, while some marketing managers might use this promising technology to "end-run traditionally unresponsive I.T. department[s]."[45]

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We need to develop and disseminate an entirely new paradigm and practice of collaboration that supersedes the traditional silos that have divided governments, philanthropies and private enterprises for decades and replace it with networks of partnerships working together to create a globally prosperous society. 

### THE SOCIAL ENTERPRISE HOW COMPANIES ARE TAPPING THE BENEFITS OF WEB 2.0

### 2.1 How Social Software will change the way we work

2.1.2 Emerging models of Enterprises

### 2.2 Enterprise 2.0

- 2.2.1 Software types, providers and corporate adopters
- 2.2.2 Applications of E2.0
- 2.2.3 The benefits of E2.0 for companies
- 2.2.4 Challenges in adoption of E2.0 tools

### 2.3 The Rise of Intranet 2.0 or Social Intranet

- 2.3.1 The difference between Intranet, Intranet 2.0 and Enterprise 2.0
- 2.3.2 Intranet's (R)evolution
- 2.3.3 Technology and tools
- 2.3.4 The Risks
- 2.3.5 !O Steps to a Social Intranet
- 2.3.6 The Case Studies of: Océ, Indensit and Regione Marche

### 2.4 How Employees communicate and collaborate in the '2.0' company

- 2.4.1 Modern Social tools for internal communication and collaboration
- 2.4.2 The Case Study of: Slack

he old models of how people publish and consume information on the Web have been radically transformed in recent times. Instead of simply viewing information on static Web pages, users now publish their own content through blogs and wikis, and on photo- and video-sharing sites. People are collaborating, discussing and forming online communities, and combining data, content, and services from multiple sources to create personalized experiences and applications.

Commonly and collectively called "Web 2.0," these new content-sharing sites, discussion and collaboration areas, and application design patterns or "mashups" are transforming the consumer Web. They also represent a significant opportunity for organizations to build new social and Web-based collaboration, productivity, and business systems, and to improve cost and revenue returns.

This chapter will examine how these technologies, techniques and concepts can be used both inside and outside the enterprise to provide new productivity and business opportunities.

### 2.1

How Social Software will change the way we work

The notion that the corporation is changing fundamentally has been around for decades - dating back to Peter Drucker's seminal work in the 1980s on 'The New Organization'. In 1992, the so-called 'The New Enterprise' was discussed in Don Tapscott' book "Paradigm Shift", saying:

"the corporation of old simply doesn't work anymore. Business transformation enabled by information is required to succeed in the new environment".

It argued that a new enterprise was emerging - open, networked, truly global and focused on knowledge workers who were empowered to innovate. Other management thinkers developed similar views during this period.

Duringthedot-comperiod of the mid to late 1990s there was a new surge in discussion of the fundamental changes to the corporation. In fact one magazine still around today was called Business 2.0. But serious discussion of the new enterprise did not begin until almost a decade later. Why not? In hindsight these

were ideas in waiting; waiting fundamental changes in for technology and the global business environment that pre-conditioned their success. In particular, the technology of the past including the dot-com boom had relatively limited economic reach. And as with all big innovations throughout history, like the steam engine, electrical power, telephone or television, we saw a speculative bubble and crash. The next stage that evolves over a period of decades - the one we're entering now - is when the technology comes of age and new business models come to fruition. Today we can see that a fundamental change is occurring in how companies compete. In particular, the rise of the new web, or so-called Web 2.0, is enabling new business strategies and designs - that enable firms to create differentiated value and/or lower cost structures - and therefore competitive advantage.

Thanks to Web 2.0, companies are beginning to conceive, design, develop, and distribute products and services in profoundly new ways. The old notion that companies have to attract, develop and retain

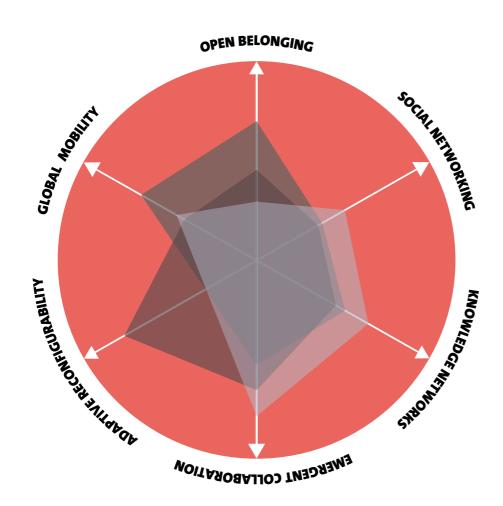
the best and brightest inside their corporate boundaries is becoming obsolete. With costs of collaboration falling precipitously, companies can increasingly source ideas, innovations and uniquely qualified minds from a vast global pool of talent. It is becoming clear that a new kind of enterprise is required - one that orchestrates resources. creates value and competes very differently from traditional firms. These new enterprises also drive important changes in their respective industries and even the rules of competition. Those that understand these changes can gain rapid advantage in their markets and build sustainable businesses. Collaborative innovation is growing at an accelerated pace due to the phenomenal success of early flag bearers. So garnering a head start in accumulating experience pays big dividends.

There are important opportunities inside and beyond corporate walls. Recently, in part due to a widely read article on 'Enterprise 2.0' written by Harvard's Andrew McAfee, the idea has become associated with collaboration inside

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We don't expect openness and collaboration to generate what they do. We overestimate the risks. We underestimate the risks of closed systems and overestimate closed systems' benefits.

### emerging models of **ENTERPRISES**



### **SOCIAL ENTERPRISE**

New collaboration, knowledge sharing and relationship schemes

### **OPEN ENTERPRISE**

Expansion and opening of of organisational boudaries

### ADAPTIVE ENTERPRISE

Flexibility and reconfigurability in process management

the firm. While this is only one dimension of the new enterprise, it is a critical one. Managers can exploit social networks, wikis, blogs, tags, collaborative filtering, digital brainstorms, telepresence and other tools of what Anthony Williams and Don Tapscott call 'the wiki workplace' in their book "Wikinomics". These tools enable powerful new approaches to collaboration that cut across organizational silos and unleash the power of human capital.

Loosening hierarchies and giving more power to employees can lead to faster innovation, lower cost structures, greater agility, improved responsiveness to customers and more authenticity and respect in the marketplace.

The nature of work is changing. Niall Cook takes this discussion to the next level by explaining how social software can transform such collaboration. It is fundamental for any manager today to understand and harness the myriad new software tools and the opportunities they provide to transform the nature of work for the better.

What we mainly need to realize is that an Enterprise 2.0 approach represents both a breath of fresh air and a democratic leveling system in the corporate workplace. New levels of interpersonal connectivity are suddenly unlocked and employees start to feel more empowered. This is because traditional business models, where departmental silos had previously segmented workers, now become interconnected. Crossdepartmental project work becomes much more efficient through increased agility and flexibility - and a positive impact on revenue and profits naturally results. Not only do employees start to care more about their role in the new Enterprise 2.0 'connected company', but partners, suppliers and customers start to perceive a more approachable 'corporate personality' of the company as a whole. Internal and external boundaries start to blur and the Enterprise 2.0 company starts to gain significant competitive advantage over its competitors. Once again, positive effects are felt on the bottom line. But how does this so-called competitive advantage opportunity manifest itself in the real world? The answer lies in three words: flexibility, productivity and agility:

- Flexibility: Breaking down work elements such as individual tasks, processes, meeting/connection points, delivery deadlines and financial targets into more modular blocks through Enterprise 2.0 controls means greater flexibility throughout the business. If these blocks are properly controlled, a positive business benefit results.
- Productivity: Process control is a necessary part of team management; the Enterprise 2.0 company works with maximized worker control, but in the most loosely-coupled and transparent way i.e. team controls are set to individual manager AND employee preferences.
- Agility: Team members are able to share ideas, suggestions, action items and opportunities in a more connected environment. Fast moving web-based information flows can be tapped into and exploited.

Beyond the commercial sector, governmental and other public bodies are feeling the effects of Enterprise 2.0 tools too.

So Enterprise 2.0 aware firms (and public bodies) realize that data is now a business resource and providing quality tools to share, manage and work with data is a business responsibility. This means evolving the organization to extend beyond the office walls and recognize the values of knowledge and expertise held in each employees' hands.

Connected file sharing, integrated document management and meeting organization tools characterize the kind of business model that will succeed most directly.

2.2

Enterprise 2.0

Organizations of all types and sizes from startups to Fortune 100 companies and from all industry verticals have seen the explosive growth on the Web of social and community sites in the consumer space such as MySpace, YouTube, and the deluge of Web 2.0 sites. Enterprises have witnessed the moves of major Web players such as Amazon, eBay, Live, Google, and Yahoo to include social and community elements, and the interest and demand that this has created. They are now actively investigating and in many cases building new community-based portals and businesses for their own organizations; Web 2.0 is moving into the enterprise.

Organizations are interested in using Web 2.0 techniques primarily in two areas: inside the organization to improve efficiency and productivity, and from the organization to the customers to improve revenue and customer satisfaction. The use of Web 2.0 within organizations is called Enterprise 2.0 and is likely to be the first area where Web 2.0 will be used by organizations.

In the corporate context, Andrew

McAfee defines Enterprise 2.0 as self-organising (emergent) social software platforms that are used in-house or between companies and their partners or customers. The decisive innovative element is that this spontaneous networked communication between users via Web 2.0 applications causes new, unplanned structures to appear over time. More precisely, Enterprise 2.0 is a web-based environment that enhances business communication, business decision making, and business innovation through: a.easier and tailored access to business information, expertise, and knowledge b.faster flexible and more information and knowledge authoring and sharing c.lower-cost application and system

This decentralised, interactive knowledge production is predicated on the participation of users and the production of content by the users (so-called user-generated content). O'Reilly calls the underlying principle "harnessing collective intelligence".

deployment

In this narrow definition that ultimately focuses on corporate investment in Web 2.0 tools, Enterprise 2.0 has an internal and an external dimension. Web 2.0 platforms may be deployed within the company to improve processes, foster collaboration and generally encourage knowledge exchanges. Outside the company, relevant functions include, for example, marketing, reputation and issue management, image building, recruiting, and collaboration with experts or suppliers, e.g. on product development.

Going by this narrow definition, the use of platforms such as YouTube or Facebook for marketing purposes would not fall under the heading Enterprise 2.0. However, the presentation of videos on filesharing platforms and/or a profile in Facebook, for example, represent new communication channels and new ways of addressing customers. An increasing number of companies are attempting to use these media to establish contact with customers and introduce them to their products, services or other activities. These platforms are also gaining

considerable significance in terms of public relations work, since journalists are increasingly turning to them as research tools.

Moreover, it is important for corporates in the context of reputation management that they hear the many voices of customers and the broader public on matters such as a company's products, services and advertising campaigns. So the relevance of Web 2.0 for companies extends beyond Enterprise 2.0 and thus beyond the platforms or tools in which a company itself invests.

Entrprise 2.0 consists of four main components:

- 1.Web 2.0 Development
- 2.Collaboration and Social Software3.Business and Collective Intelligence
- 4.Information Access and Management
- 1.The Web 2.0 component offers two main features:
- a.the Social Software, which enables an easier sharing of expertise, best practices, and knowledge through blogs, wikis, podcasts,

online communities, tagging and syndication.

b.enhanced web development. which offers improved user interface visualisation and interactivity (through Ajax, Adobe Flash. dashboards). faster and reusable application development (through Widgets, mashups, web frameworks. SOA). lower-cost applications deployment models (through Software as a (Service SaaS) and open source solutions).

2.The Collaboration component offers two main features:

a.Workgroup Computing, which allows better information authoring and sharing by information producers (employees and interand intra-enterprise teams) (through office computing and web conferencing).

b.Role-based Workspaces which give tailored and self-service access to business data, information, knowledge, and to business processes for information consumers including employees, partners, clients, consumers and suppliers.

3.The Collective Intelligence

component offers two main features:

a.improved business knowledge for faster and more informed business decisions and actions thanks to business data intelligence, business content intelligence and business collaboration.

b.business examples: pricing optimization, web store personalization and optimization, demand/supplychainmanagement, product quality management, customer satisfaction, call center agent support, equipment outage tracking and prediction.

4.Information Access and Management offers two main features:

a. information access, which allows a faster ans easier access to corporate information through enterprise search and RSS and/or Atom

b.information management, which allows bettere quality and more accurate corporate information through business content integration and management (documents, web content and rich media); business data integration

COLLABORATION & SO and management (structured and semi-structured data); business AND TO DEVELOP MENT data and content governance; support for external information providers (syndicated content). **COMPONENTS OF ENTERPRISE 2.0** INFORMATION ACCESS THE MANAGEMENT 



### PREDICTION MARKE

### **TAGGING**

the use of keywords to track content

### SOCIAL NETWORKING use of the Internet to build and maintain relationships

Web site or Web application that combines programming and content from more than one source

an individual's or company's online journal

really simple syndication

### **SOFTWARE PROVIDERS**

### MediaWiki Dresdner Kleinwort **TWiki** Microsoft Kwiki Nokia **PmWiki** SAP Socialtext Google, HP, Microsoft, Yahoo! **ConnectBeam** Honeywell, IBM, Sony-BMG LinkedIn® Cisco Dresdner Kleinwort Minglebox Jhoom Microsoft Humsubka Nike, Salary.com Greasemonkey Amazon, Dun & Bradstreet, E\*Trade, Google, IBM, JDS Uniphase, Siemens, Société Générale TypePad® General Motors **Blogger (Google service)** Hitachi WordPress (free software) Infosys Movable Type® Intel, Macromedia, Novell, Sun Microsystems RSS feed reader Amazon •••••• Cisco **RSS** specifications The Wall Street Journal HexaMail

**CORPORATE ADOPTERS** 

As already Andrew McAfee, the Harvard professor credited with coining the term, defines Enterprise 2.0 as the "use of emergent social software platforms within companies or between companies and their partners or customers." Put more simply, it means the use of an entire suite of emergent technologies - wikis, blogs, tagging, and social networking tools - both within and beyond the four walls of an enterprise.

Many social networking applications were created and first applied in the world of computer "geeks" before becoming more broadly adopted, especially by Generation Y and business.

Blogging went mainstream when global media companies such as Google and AOL bought or set up their own blogging applications (Google bought Blogger in 2003). Businesses have now started to adopt blogs, sometimes simply to coordinate action and ideas on a project and sometimes, like Jonathan Schwartz, CEO of Sun Microsystems, to speak to customers without the mediation of a press office.

To help ensure success, Microsoft hired blogger Robert Scoble from NEC to be its "technical evangelist." Scoble has now moved on from Microsoft, but his influence remains in a range of employee blogs.

Some businesses consult blogs as a defense mechanism. For example, bloggers discovered that expensive u-shaped bicycle locks manufactured by Kryptonite could be picked easily, and a video showing how was posted on Engadget blog. Kryptonite quickly solved the problem, but its media chief has decided to check several blogs every day for early signs of trouble.

### Wikis

Wikipedia, an online encyclopedia, popularized the phenomenon of user-generated knowledge. Today, companies are examining whether wikis can be used to help foster collaboration on business projects. Nokia hosts a number of wikis, some of which are used internally to coordinate technology investment research. And Forum Nokia Wiki provides a place where issues around Nokia's phones and software are debated.

Disney's Family.com site is a wiki that contains features aimed at parents that will aggregate links to other parenting sites as well as offer tips. Somewhat surprisingly, it is an investment bank- not the most natural adopter of social technology - that operates the largest corporate wiki. BusinessWeek reports that more than 50 percent of all employees at Dresdner Kleinwort participate, fueling collaboration and communication to ensure that all team members are "on the same page" in terms of project management and calendars. This may seem like a simple application, but the investment bank has found it to be a powerful efficiency tool.

### RSS Technology

RSS feeds were designed to publish frequently updated Web content. They are now widely used by media companies—from Techworld, a British magazine, to The Wall Street Journal—to enable subscribers to view breaking news. They also help the media companies to track their customers' interests closely and to tailor advertising accordingly.

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Enterprise 2.0 is more than just Web 2.0 for business. While Web 2.0 can deliver genuine advantages for both business users and consumers, the real 'Enterprise 2.0' will encompass a far broader and more complex vision.

Enterprise 2.0 is the synergy of a new set of technologies, development models and delivery methods that are used to develop business software and deliver it to users.

### Tagging

Tagging is the use of keywords to track content on Web sites. It was first employed on nonbusiness sites such as two that were acquired by Yahoo!: Del.ici.ous, a social bookmarking site where users can share links, and Flickr, a photo-sharing site. Commentator David Weinberger, an academic, blogger, and writer on Web 2.0 issues and a fellow at Harvard's Beckman Center, recommends that companies use tagging as a means of leveraging hundreds of strangers as researchers.

### Mashups

Mashups are mixtures of various applications. Web sites and In San Francisco, for example, Parkingcarma.com helps drivers find parking spaces on the city's congested streets by "mashing" Google Maps and Google Earth with its own database tools. And a program called Greasemonkey makes it easy to create and use mashups such as Book Burro, which can give a user shopping on, say, Amazon.com price comparisons at other retailers.

### Social Networking

Following on the success of sites such as MySpace, which connects millions across the globe, attention has shifted to Web sites dedicated to the same social networking function for use by professionals. Social networking software illustrates, perhaps even better than wikis or blogs, the power of network effects - where product value rises with the number of usersin E2.0 software. Just as MySpace derives its value from being a virtual meeting place packed with teenagers and twenty-somethings, equivalent networks for business, such as LinkedIn and Visible Path. are most valuable for the contacts they generate. They are used by companies that pay handsomely for targeted recruitment opportunities and by individuals who can leverage networks of people with whom they already have a connection (e.g., alumni or shared company history). Moreover, both sites provide a "bridge" to help members use their contacts to further business relationships that otherwise would be inaccessible. According to an April 2007 press release, LinkedIn

has 350 corporate members (from Microsoft to hedge funds) each paying up to USD250,000 to advertise jobs, identify experts, and develop sales leads throughout its expanding network. London-based Trampoline Systems is attempting to revolutionize enterprisewide social networking technologies through a new application called SONAR (Social Networks And Relevance). Ethnographer turned technology entrepreneur Charles Armstrong developed the concept after completing twelve months of field research in the Isles of Scilly. Studying the islanders' interactions and social behaviors. he concluded that most of today's business software runs counter to how humans naturally share information. Trampoline's SONAR application is designed to connect to corporate enterprise systems, such as e-mail, contact databases. and document archives, where it analyzes data and builds a map of the enterprise's social networks, information flows, and individuals' expertise and interests.

### HP: Blazing a Blogging Trail

HP has embraced employee blogs with a vengeance. Its employees blog on subjects ranging from the utility of Second Life® (a virtual world built and owned by users) as a marketing tool to printer compatibility issues with the new Microsoft VistaTM operating system.

These blogs let companies communicate in a way they hope customers will perceive as candid and hopest

For example, Vince Ferraro on the HP LaserJet blog comes across as forthright with users about problems some HP printer drivers are experiencing with the operating system.

In a recent post, he apologized for "any lingering issues that you may be experiencing in your print environment." And Eric Kintz, vice president of Global Marketing Strategy & Excellence, counters rival marketers from IBM and Dell on HP's

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### **KNOWLEDGE SHARING & MNG**

### **COLLABORATION**

Customer relations Transformative ideas

General Motors

Ads for Chevy Tahoe "Innovation jams"

**USE OF E2.0** 

### CORPORATE ADOPTER

**PROJECT** 

Collaborative document production	All-purpose "teamware"	Knowledgemanagement	Knowledge broadcast					
IBM	Nokia	Honeywell	Microsoft	Intel	Western States Intelligence Network	Jonathan Schwartz, Sun Microsytems Bob Lutz, General Motors	StudioDell	-
Patent manifesto	Tech investment research	Catalogue Internet and intranet content	Partners helping with Visual Studio doc	Share financial highlights, progress of internal projects	Collate & broadcast crime-fightinginfo	Communicate directly with customers on a blog	Video-sharing site with company and user videos	

### **PROBLEM SOLVING**

### **INNOVATION**

### E 2.0

Novartis Sharing computing power and	brainpower	Seti@home	Dell Answering questions	eBay Wiki	Colgate-Palmolive Broadcast search	Stockphoto "Crowdsourcing"	Cambrian House	Google Expressing collective judgment	НР	Dell's IdeaStorm Collecting customer feedback	Yahoo!
		S			Colgate	<u>;:</u>	Camb			Dell's	
Share raw data on type two diabetes to kickstart research Net-connected computers used to find extraterrestrial intelligence Answers questions about XPS 700	Net-connected computers used to find extraterrestrial intelligence Answers questions about XPS 700	Answers questions about XPS 700	computers	Information sharing about shipping rates, fraud protection	Used as innovation tool	Amateur photos at tiny prices	Marketplace of ideas and projects	Used to estimate metrics, such as when offices should be open	Prediction markets in several business units	Users' product & feature requests voted on	Uses Digg. like voting for customer feedback (On Digg, news stories and Web sites are promoted to the front page through a userbasedranking system

What are the applications of E2.0? How can they help us in the key managerial challenges of the twenty-first century, namely knowledge sharing and management, problem solving, innovation, and collaboration?

Knowledge Sharing and Management

Sharing and managing knowledge is one of the most obvious uses for E2.0 technologies.

Today, most corporate knowledge is shared through e-mail and corporate intranets:

- E-mail is essentially bilateral and sequential.
- Intranets have some merit as bulletin boards but they tend to be run by a small communications team that has to guess what information is relevant to colleagues and how to prioritize it. By definition, the information posted tends to be static.

By contrast, tools such as blogs and wikis enable many team members to contribute to a knowledge pool. Moreover, because the information does not have to be structured up front, but rather evolves in

accordance with the demands placed upon it, a collaborative document produced using wiki software would likely be more efficient and more relevant. IBM operates dozens of wikis within its enterprise to foster everything from internal project collaboration to software development. It is also taking part in an experimental project, the Community Patent Initiative, with others including Microsoft, General Electric, and HP. This initiative uses the "wisdom of crowds" to help the understaffed Office U.S. Patent review applications and ensure that only truly worthwhile inventions get 20 years of near-monopoly protection. Companies were slower to pick up on the new phenomenon of tagging. Honeywell, an industrial conglomerate, is among the first to introduce a tagging capability behind its firewall.

The aim, says Rich Hoeg, a senior Honeywell manager and blogger, is to allow engineers "to perform knowledge discovery, research, and sharing across the miles, even if they don't know each other."

Several companies are using both

blogs and wikis to broadcast knowledge to an internal audience, to specific clients, and to the public at large. The Western States Intelligence Network has adopted wikis to help assemble crimefighting information in one place. In the past, this sort of information was shared via e-mail, and vital intelligence often would fall through the cracks.

### **Problem Solving**

Socially collaborative software puts the dictum "two heads are better than one" to the test on a grand scale. In particular, certain companies and institutions are experimenting with ways to harness brainpower outside their own walls to solve problems. One application is to set up an online "war room" where relevant information about a fast-changing situation can be gathered. America's Defense Intelligence Agency is using an internal wiki called "Intellipedia" to help analyze security threats. In the past, producing a national intelligence estimate for a foreign country would have required a timeconsuming, face-to-face meeting of the relevant analysts, but many with an understanding of the issues would have been excluded due to location. Intellipedia allows anyone with expertise and an interest, and even a little time, to contribute. In addition, the agency set up a blog on avian flu that is open to outside sources as well as those inside the intelligence community. It has been so successful that a senior health official considers it to be the government's most crucial resource on avian flu. Wikis also are a great resource for linking experts to those who need answers. Dell uses a blog - Direct2Dell - to answer questions about its XPS700 computers. Online Internet company eBay has set up a wiki forum, eBay Wiki, where buyers and sellers can post tips on getting the most out of the online auction Web site.

### Innovation

A more radical application for businesses is in the hunt for innovation, traditionally one of the most proprietary of corporate endeavors involving research and development teams that work in secrecy. However, some

companies are finding that product development can be so fast-moving that there are advantages to innovation outsourcing some online, as long as they can retain ownership of key intellectual property. Many old-line companies have been using InnoCentive, a matchmaker between companies and scientists, to help find solutions. InnoCentive posts the request on the Web for anyone to address, ensuring anonymity and the proper transfer of intellectual property rights. One example is Colgate-Palmolive, which hired InnoCentive to find a scientist who could work out a more efficient way of getting toothpaste into the tube. Socalled "crowdsourcing" takes this approach even further. In principle, it involves farming out a complex task to an amorphous group of people and letting them decide what element or elements of it they want to work on. Cambrian House, a Canadian software maker, is relying on its "crowd" to tell it what to build, and to do a lot of the coding. It is in Asia, however, that crowdsourcing may be taking the most innovative direction. Adam Arvidsson of the European University Institute of Firenze observes that the Indian cell phone company Bharti is outsourcing product marketing and distribution to community social networks through its process of "open distribution." By channeling the knowledge-sharing and wordof-mouth potential of these social networks, companies such as Bharti can lower distribution costs. Similarly, Arvidsson notes that in China some small electronics companies transforming are traditional outsourcing practices based on crowdsourcing techniques by replacing their centralized outsourcing-innovation process with networks consisting of several hundred suppliers in which the innovation processes themselves are outsourced. This technique enables them to leverage unique knowledge and process improvements from an array of participants. Social software also can be used to harness the "wisdom of crowds" when it comes to reading the collective mood or assessing a situation. More specific than collective intelligence, it lets a community weigh in with opinions on topics of interest. A powerful

tool for accomplishing this is the prediction market, where users bet on the likelihood of specific events. Google, Yahoo!, Microsoft, and HP Labs are experimenting with internal prediction markets to improve accuracy on such things as the market price of computer memory to the release date of new software products, according to corporate sources and The 360 techblog.

### Collaboration

IBM holds so-called "innovation jams" where thousands of its employees are asked to participate in chatrooms simultaneously. The hope is that transformational business ideas will emerge from the online discussions. IBM CEO Samuel Palmisano told BusinessWeek that he believes the opinions of IBM's 100,000 employees will result in "catalytic innovations" that can generate new business for the IT giant. There are other ways companies can encourage employees to collaborate. The Google spreadsheet application allows users to work on business plans together in real time.

Companies can brainstorm with suppliers over wikis about parts, delivery schedules, or logistics. And why not use podcasts - rather than corporate statements - to share with employees ideas about products, the industry, or company culture?

Challenges to Adoption of E2.0 Tools Like many group applications, E2.0 tools will face a variety of barriers in the corporation - ranging from people and processes to the actual tools. While security is often cited as a key concern, another real risk is not that wikis or blogs will reveal too much information, but rather too little. Social networking requires a high volume of active participants and regular postings. Many wikis and blogs in the wider world fail due to lack of interest. Just as damaging are institutional cultures or norms that work against sharing information, either because of concerns about confidentiality or because of hierarchical structures. It is telling that it was the most senior and the most junior officers who were in favor of Intellipedia at the Defense Intelligence Agency, while the bureaucrats in the middle were resistant. One of the reasons for their concern, as Harvard's Weinberger pointed out, is that intelligence analysts are graded on the basis of their report writing. If you can't tell who edited the wiki or who added the key fact that pointed to a terror cell, then how do you allocate credit? Nor is the concern about information sharing trivial. Of course, in organizations such as America's various intelligence agencies, if the information falls into the wrong hands the results could be catastrophic. Companies, too, are right to be concerned about possible leaching of confidential information to employees who could move to a rival. And it would be naive to assume that employees do not understand that knowledge is power. What incentive is there for a seasoned saleswoman, for example, to share her best contacts with a rookie colleague, and thereby give away her competitive advantage? Then there are the cultural and legal issues. While the United States enjoys wide freedom of speech under the constitution, many other countries take a much

less tolerant view. And if free comment is allowed in a corporate blog or wiki, the company has to be alert to the dangers of remarks that may be libelous or infringe employee rights laws (e.g., bullying or sexual or racial harassment).

Moreover, how can employees be certain that blogs or wikis are not merely the latest corporate fad? A politically savvy employee might want to hold back before indulging in something that may prove to be short-lived in popularity and acceptability but long-lived in the corporate database.

Finally, there is the challenge of how new technologies interact with legacy systems; to be useful, they should be searchable throughout the company. However, companies are often divided according to business unit or country, so managers need to ensure that the IT project is appropriately staffed and has adequate resources.

2.3

The rise of Intranet 2.0 or Social Intranet

From Internet, to the World Wide Web, to Web 1.0 and the boom of the "2.0" era - with Web 2.0 and Enterprise 2.0 - now it's time to dig deeper and arrive to the core enterprise communication and collaboration's support system, Intranet 2.0. But before that we have to make clear which the differences between some of the most used terms in this field are, since they can be easily mistaken and difficult to be distinguished.

### The terms are:

- Intranet or Intranet 1.0
- Intranet 2.0, Social Intranet or Collaborative Intranet
- Enterprise 2.0 or Enterprise Social Network.

There are 7 main differences between these terms and the concepts that they represent:

- 1. The name
- 2. The definition
- 3. The Issuer
- 4. The recipient
- 5. The tool
- 6. The goal
- 7. The company

### 1. The name

Different concepts, different names.

- *Intranet*: Technical term made up of "intra" (internal) + "net" (network). Digital space connected in an internal network.
- Collaborative Intranet (or 2.0): In this case, we give it a "last name" which gives it a nuance: collaborative and/or social (2.0).
- Enterprise Social Network: Finally, we refer directly to a Network, which is what matters, the interlinked structure between all its components.

### 2. The definition

According to the terminology difference, we find ourselves faced with different definitions.

- Intranet: An intranet is a private network of computers that use Internet technology to share part of its information and operational systems within an organization. The term intranet is used in contrast to Internet, a network between organizations, making reference to a network within the area of an organization.
- Collaborative Intranet (or 2.0): The same definition as above to

which we add, as we pointed out in the previous point, a collaborative and/or social nuance, meaning that its contents and structure can be enriched collaboratively by its members' contributions.

• Enterprise Social Network: In this case, we refer to a network, a space that is structured and completed by the relationships between members of the community and whose contents are provided by the members themselves. All members have the chance to contribute to the collective knowledge, always within (as in the previous points) the scope of an organization.

### 1. The issuer

Since with these three terms we refer to a digital environment in which contents are transmitted internally, who exactly is the author or issuer in each one?

- Intranet: The issuer is the one defined as the voice of the company: Human Resources, Internal Communication or even IT. The ones that have decided why and what the intranet will be used for.
- Collaborative Intranet (or 2.0): In this case, the issuer is the same,

however, permissions are given to employees to enter comments, opinions or valuations, to give that touch of "collaboration" in the corporate internal system.

• Enterprise Social Network: In an Enterprise Social Network, all members of the business network are issuers, authors, voices of the company: employees, partners, customers, followers, influencers, competition. detractors. ΑII contribute knowledge to the project, all help to make the company grow. Be it directly (giving them access to the network) or indirectly, gathering their contributions on the internet (external network) through content tracking systems (Google Alerts, RSS, etc.).

### 4. The recipient

In the same way there is an issuer, in a communicative process there is also a recipient. Who are the contents that are published in each of these corporate digital spaces aimed at?

- Intranet: At employees. Classical top-down vertical structure.
- Collaborative Intranet (or 2.0): At employees, and in some cases, at

top management. Giving the option to comment on what the "voice of the company" transmits, this voice can become "heard" and can receive and/or listen to contributions.

• Enterprise Social Network: At everyone, as the idea is to encourage bottom-up knowledge, not creating information silos, and that the ideas of all employees (especially the productive ones) reach the top levels and vice versa, as on many occasions the vision of management is not properly transmitted to the work teams.

Combining points 3 and 4, any contribution and collective active listening ("the power of the crowd") proves to be more enriching than isolated, individual contributions and responses.

### 5. The tool

This section could be also called "technology".

• Intranet: (Almost) custom software, normally costly to implement, both in terms of finances, resources (people and technology), and time. Complex configuration, clearly structured functions and difficult to modify.

SharePoint or SAP would be a good example of this type of intranet.

- Collaborative Intranet (or 2.0): (Almost) custom software, normally costly to implement, both in terms of finances, resources (people and technology), and time, with a "social layer" that adds collaborative features that the software itself does not posses and that would be complex to incorporate natively in the system. This is a hybrid solution. A possible example would be the social layers that are added "SharePoint" nowadays to (including Zyncro).
- Enterprise Social Network: Software with a social DNA. commonly SaaS that allows horizontal integration. easy incorporation of new users, quick and simple personalization, that incorporates new features and integrations easily, with mobile access, and that in turn has many configuration options (like traditional software) but based on usability and intuition concepts, like mainstream social networks. An example is Zyncro.

### 6. The goal

Josep Baijet, Director of ZyncSocial, is one of the professionals with the most experience in implementing the three listed environments and the author of the "SocialMethods", the goals sought with the implementation of a internal, social corporate solution. What he suggests according to this classification is:

- Intranet: It attempts to establish a top-down communication, act as a corporate document repository and be the point of access for the company's applications.
- Collaborative Intranet (or 2.0): Same goals as the previous but includes the goal of being the starting point for contributions from the company's employees.
- Enterprise Social Network: In this case, we should look at the SocialMethods: co-creation. collaboration, conflict resolution, engagement, process improvement, knowledge management, external communication, document management, innovation, training, relationships between people. mentoring, workflow, project management, sales management

(leads management and interactive customer service flows), personal productivity improvement.

### 7. The company

Last but not least, we need to look at the type of company that looks at incorporating one system or another.

- Intranet: "Established" companies, normally large scale, whose members still do not feel ready for the change, as they usually have an intranet already which, as we said, they have spent much money, time, resources and effort on.
- Collaborative Intranet (or 2.0): Companies, normally also largescale, that are aware of the need for change but that want to do it in a controlled, gradual manner, reusing what they already have.
- Enterprise Social Network: The company 2.0. An enterprise in which size doesn't matter. Hyperconnected, hypermotivated, hypertechnological, hyper-efficient.

### **INTRANET'S EVOLUTION** INTERNAL/EXTERNAL WORKPLACE **SOCIAL INTRANET GROUPWARE SELF-SERVICE** COMMUNICATION 2010s 1900s **2000s**

Intranet, Social Intranet, Digital Workspace. The term Intranet the exact opposite of Internet and Extranet - was coined in the first half of the 1990s to indicate Web communication environments restricted to the employees of an organization. Generally a wide range of information and services from the organization's internal IT systems are available from this that would not be available from the outside, and one companywide intranet can constitute an important focal point of internal communication and collaboration, and provide a single starting point to access internal and external resources. Intranets began to appear in a range of larger organizations from 1994. The launch of the a free webserver from Microsoft in 1996 helped make the technology accessible to a wider market.[3] Over time and with the evolution of the role of Internal Communication in organizational logic, the Intranet has gone from being one of the tools of communication to the convergence and integration platform able to carry out more and more relevant strategic functions.

The essential terms of this evolutionary journey are outlined below:

- Communication tool
- Self-service applications
- Groupware
- Social Intranet
- Digital Workspace
- **Communication tool:** the Intranet is the website for employees, useful for providing the company with a single and fast tool for circulating information, for building identities, and for reinforcing values and perspectives.
- **Self-service applications:** in the Intranet, work tools or individual applications linked to business processes appear.
- **Groupware:** at the turn of the new millennium project management environments (calendars, project management, forums, etc.) and structured document management repositories made their appearance.
- **Social Intranet:** in the last 5 years the introduction of collaboration

facilities such as tagging, wikis, blogs and forums has transformed the nature of intranets. The relational component has become more and more strategic, and the logic of social networks (activity streams, microblogging, user profiles, etc.) has moved the focus further towards a greater socialization of contents and processes.

• **Digital Workspace:** a further evolutionary step that we are witnessing and that we will continue to witness more and more is the integration of intranets with a company's external portals, to talk and interact with partners and clients. In fact, digital workplaces are being planned in which private and open environments coexist that, also thanks to social applications, extend the company's capability of communication and value creation.

Talking about the recent trends and components and the needs an intranet must satisfy, *Digital Workplace Trends 2012* is the annual research on Intranets conducted by Jane McConnell on more than 450 European and North American organizations. As regards the objectives of organizations to be pursued through their own company network the following are singled out:

- Improvement of communication towards their own employees
- Spread and growth of collaborative environments
- Activation of customer service tools
- Less pursued, on the other hand, are the support in decision making and the management of online processes.

If we look at mobile services in particular, we discover how companies with complex sales networks are investing to improve collaboration among resources in the field and make access to experts easier.

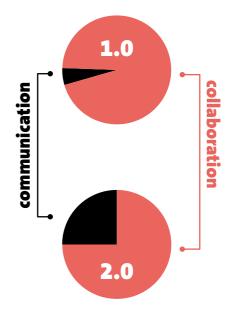
Another phenomenon to underline is the growing tendency to manage digital policies through a single

group of specialists (consultants and professionals) and managers who deal with the management and evolution of internal and external environments. The same managerial group (digital board) responsible for designing intranets but also for designing client and partner portals; the user experience, the technological and web communication competencies tend to merge between internal and external. The communication subjects and objectives change but the interaction dynamics do not; and above all the company users, being in turn consumers and users of other external portals. recognize the same navigation and participation logic within their own intranet.

The expectations of future intranets are another interesting aspect of McConnell's research:

• Intranets built more and more around people in all stages of the process: in design (co-designing contents and services that are more appropriate to the specific context), in user experience (introducing the ability to personalise navigation and services), in management (with

- a distributed governance);
- Boosted information research services, intelligent content categorisation services, based also on user input;
- Advanced services for work teams that can more easily carry out activities, have access to experts and be more and more connected (social networking, social tagging, location awareness, etc.);
- A greater relevance of the user experience in designing navigation.



### **SOCIAL INTRANET**



**INTRANET 1.0** 

### **COMMUNICATION**

Communication tools to share vision, identity and information

### **CONTENTS**

Repository and research of corporate and professional content

**INTRANET 2.0** 

### **COLLABORATION**

Field in which every operation that requires interaction takes place

### **ACTIVITIES**

Self-service applications and end-to-end services



The needs that an intranet must satisfy can be divided into four fundamental areas:

**Communication and Contents**, belonging to Intranet 1.0, and **Collaboration and Activities**, belonging to the new intranet 2.0.

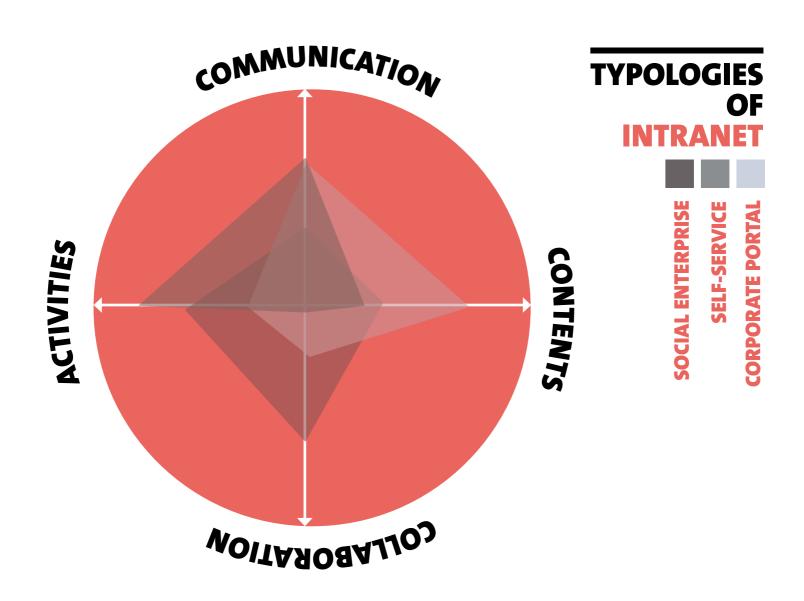
All operations can be traced back to these areas knowing that we are comparing ourselves with different organizational contexts in which these areas are contemplated and managed in different ways. If we think, for example, of an intranet with ten years of history, we are faced with an environment in which communication and contents are predominant and in which we would be unlikely to see the same care dedicated to the management of business and collaboration activities. Even today we sometimes happen to analyse contexts in which, even when contemplating all four areas, intranets organised starting from the contents and a company-user information flow. These are technologically obsolete not contexts, but the stratification of

contexts over time can generate "information monsters" in which it is tough to find the contents and responses useful for daily work. If collaboration environments in which users can work and share experiences. knowledge solutions are added to the "classic" communication and repository functions of contents, the intranet takes on a new role; it becomes to all extents and purposes a business tool. The stronger the link between the digital environment and daily work matters, the more this tool will be seen as useful, and therefore used.

An intranet can have different characteristics and objectives based on the organizational context and the market in which it operates. We can see that intranets are used in various sectors and with a varied number of users to be managed: there are those who focus on contents, those who focus on collaboration, and those who are only responsible for communication, or only for services. We have noticed three types of intranet, which we have classified with a label assigned based on their

tendency to be responsible for the fundamental areas in different ways:

- **Social Enterprise:** the Intranet is the place in which business applications integrate with emerging collaborative activities.
- Corporate Portal: the Intranet is the company's image and its information reference. There is a strong emphasis on the values of communication (Identity, Values, History, Offer, Organizational Setup) and document repository.
- **Self-service:** this is where the individual user is the centre of communication and services. We are faced with a service portal that supports and informs employees.



Moreover, let's see which the benefits of the adoption of Intranet 2.0 are for companies, managers and its employees.

- Workforce productivity
- Time
- Communication
- Web publishing
- Business operations and management
- Cost-effectiveness
- Enhanced collaboration
- Cross-platform capability
- Built for one audience
- Promote common corporate culture
- Immediate updates
- Supports a distributed computing architecture

### **Workforce productivity:**

Intranets can help users to locate and view information faster and use applications relevant to their roles and responsibilities. With the help of a web browser interface, users can access data held in any database the organization wants to make available, anytime and

- subject to security provisions
- from anywhere within the

company workstations, increasing employees' ability to perform their jobs faster, more accurately, and with confidence that they have the right information. It also helps to improve the services provided to the users.

### Time:

Intranets allow organizations to distribute information to employees on an as-needed basis; Employees may link to relevant information at their convenience, rather than being distracted indiscriminately by email.

### Communication:

Intranets can serve as powerful tools for communication within an organization, vertically strategic initiatives that have a global reach throughout the organization. The type of information that can easily be conveyed is the purpose of the initiative and what the initiative is aiming to achieve, who is driving the initiative, results achieved to date, and who to speak to for more information. By providing this information on the intranet, staff have the opportunity to keep upto-date with the strategic focus of the organization. Some examples of communication would be chat, email, and/or blogs. A great real world example of where an intranet helped a company communicate is when Nestle had a number of food processing plants in Scandinavia. Their central support system had to deal with a number of queries every day.[8] When Nestle decided to invest in an intranet, they quickly realized the savings. McGovern says the savings from the reduction in query calls was substantially greater than the investment in the intranet.

### Web publishing:

It allows cumbersome corporate knowledge to be maintained and easily accessed throughout the company using hypermedia and Web technologies.[9] Examples employee include: manuals. documents, benefits company policies, business standards, news feeds, and even training, can be accessed using common Internet standards (Acrobat files, Flash files, CGI applications). Because each business unit can update the online

copy of a document, the most recent version is usually available to employees using the intranet.

### Business operations and management:

Intranets are also being used as a platform for developing and deploying applications to support business operations and decisions across the internetworked enterprise.[9]

### **Cost-effectiveness:**

Users can view information and data via web-browser rather than maintaining physical documents such as procedure manuals, internal phone list and requisition forms. This can potentially save the business money on printing, duplicating documents, and the environment as well as document maintenance overhead. For example, the HRM PeopleSoft company "derived significant cost savings by shifting HR processes to the intranet". [8] McGovern goes on to say the manual cost of enrolling in benefits was found to be USD109.48 per enrollment. "Shifting this process to the intranet reduced the cost per enrollment to \$21.79; a saving of 80 percent". Another company that saved money on expense reports was Cisco. "In 1996, Cisco processed 54,000 reports and the amount of dollars processed was USD19 million".[8]

### **Enhance collaboration:**

Information is easily accessible by all authorised users, which enables teamwork.[9]

### **Cross-platform capability:**

Standards-compliant web browsers are available for Windows, Mac, and UNIX.

### **Built for one audience:**

Many companies dictate computer specifications which, in turn, may allow Intranet developers to write applications that only have to work on one browser (no cross-browser compatibility issues). Being able to specifically address your "viewer" is a great advantage. Since Intranets are user-specific (requiring database/network authentication prior to access), you know exactly who you are interfacing with and can personalize your Intranet based

on role (job title, department) or individual ("Congratulations Jane, on your 3rd year with our company!").

### Promote common corporate culture:

Every user has the ability to view the same information within the Intranet.

### Immediate updates:

When dealing with the public in any capacity, laws, specifications, and parameters can change. Intranets make it possible to provide your audience with "live" changes so they are kept up-to-date, which can limit a company's liability.[9]

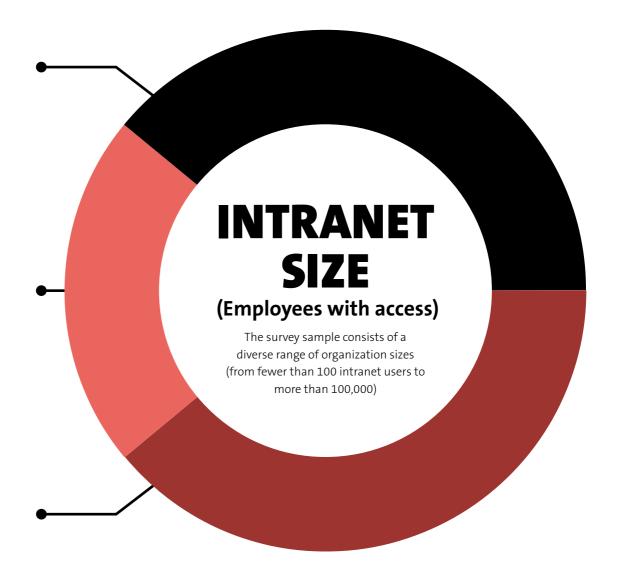
### Supports a distributed computing architecture:

The intranet can also be linked to a company's management information system, for example a time keeping system.

39% of organizations have one to 999 employees (small) with intranet access

39% of organizations have 1,000 to 9,999 employees (medium) with intranet access

22% of organizations have more than 10,000 + employees (large) with intranet access



"

Intranet 2.0 or Social intranet is an intranet that features multiple social media tools for most or all employees to use as collaboration vehicles for sharing knowledge with other employees. A social intranet may feature blogs, wikis, discussion forums, social networking, or a combination of these or any other Web 2.0 (intranet 2.0) tool with at least some or limited exposure (optional) from the main intranet or portal home page.

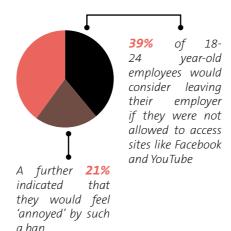
Once a pipedream or just another passing fad, intranet 2.0 tools such as blogs, wikis and other vehicles have become mainstream, and are present in nearly two-thirds of organizations.



In fact, those organizations that haven't adopted such tools are now in the minority and are flirting with disaster and the 'global talent crunch'-the fight for young, talented individuals to replace the rapidly aging and retiring baby boomers. Organizations risk being squeezed by the talent crunch and losing the campaign for young talent if they ignore the demands of the next generation of 20-something workers that not only desire social media in their jobs, they've come to demand it.

Consider for a moment the powerful Telindus study (2008) of 1,000 European employees that should

serve as a warning to all employers and communicators:



It should be of no surprise then that social media on the corporate intranet has jumped in prevalence so dramatically in the past two years: from nice-to-have to common-place (if not mandatory). According to the Social Intranet Study (results from 1,400+ respondent organizations):

- 75% have intranet blogs; 26% have deployed blogs enterprise wide; 4% have no plans or interest in deploying blogs.
- 65% have intranet discussion forums; 26% have deployed intranet

discussion forums enterprise wide; 7% have no plans or interest in intranet discussion forums.

- 63% have intranet instant messaging; 44% use instant messaging on their intranets enterprise wide; 16% have no plans or interest in deploying instant messaging on their intranets.
- 61% have intranet wikis; 19% use intranet wikis enterprise wide; 12% have no plans or interest in intranet wikis.
- 60% have intranet user commenting; 32% have deployed intranet user commenting enterprise wide; 8% have no plans or interest in intranet user commenting.

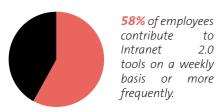
One of the reasons for the rapid adoption of social media behind the firewall is not only the demand, but the cost of deploying these tools: intranet 2.0 is cheap. According to the Social Intranet Study, nearly half (38%) of organizations that have deployed intranet 2.0 tools have spent under \$10,000 doing so; another 24% have spent under \$10,000 - \$50,000. However, the lost cost of entry comes with a risk, and a potential cost.

The first ingredient to a social intranet is of course **PEOPLE**: executives, managers and frontline employees who depend on social media to communicate collaborate with each other on a daily or weekly basis. Unfortunately, executives aren't quite pulling their weight when it comes to contributing regularly to Intranet 2.0 tools, stifling many organizations' attempts at turning their intranet into a social intranet:

Many executives still do not embrace the intranet, even from a sponsorship or stewardship role. However, the most successful intranets have one common ingredient: active executive support and sponsorship. Without active executive support, a social intranet will fall short of its potential.

To be a true social intranet, access to these tools needs to be open to all or most employees.

allow



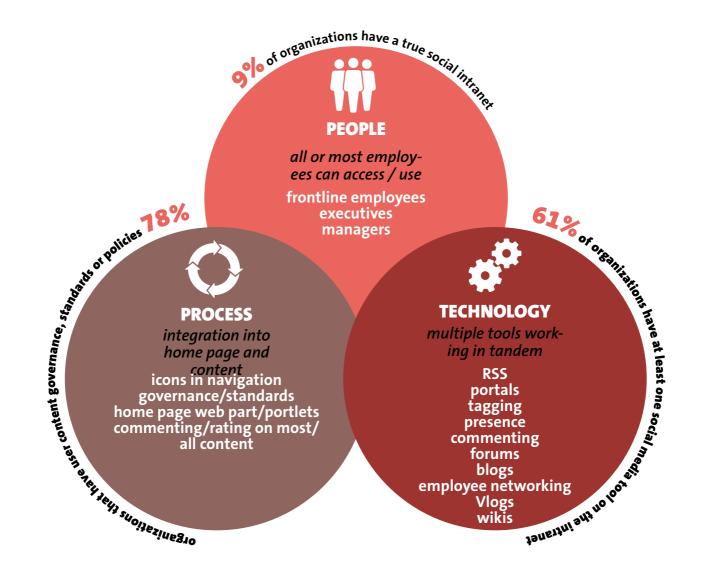




This means a large portion of the employee population doesn't have access to social media tools and is missing out on an opportunity to help create a social intranet (source: Social Intranet Study).

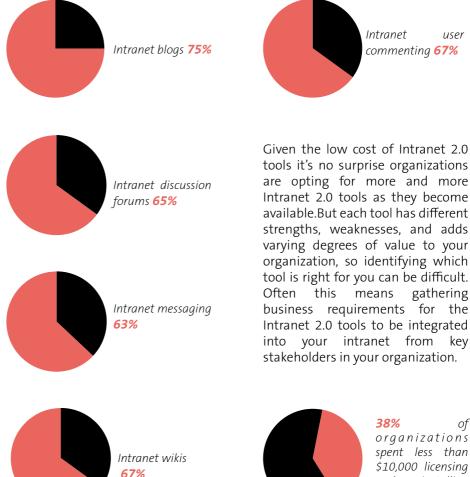
Giving employees free reign of Intranet 2.0 tools doesn't come without risk. To mitigate that risk, you need to plan accordingly and support the tools with the proper governance, standards and policies before rolling out these tools and giving employees full access.

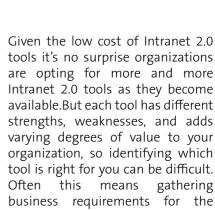
Integrating social media tools on to the homepage is a delicate process and is likely to be met with some resistance, since in most organizations real estate on the homepage is highly desirable. Buy-in from stakeholders therefore extremely valuable when integrating Intranet 2.0 tools, as the employee population is much more likely to adopt something they've helped create. Key to the **PROCESS** component is establishing and defining a thorough governance model. Simply put, governance defines an intranet's ownership and management model and structure including the management team, the roles & responsibilities of contributors, the decision making process, the policies & standards. Like the content of our own website or intranet, planning and governance is technology



agnostic; whether it's SharePoint, IBM or another portal or content management system, the necessity for and the approach to governance is the same. Given its technology neutral status in governance is largely applicable to any technology platform. Politics and the issues of control, ownership and standards go hand-in-hand with intranet management and perhaps these issues, more than any other, have driven the requirement for planning and defined governance models. Sadly, very few organizations actually have a well-defined governance model, and many of those have spent hundreds-ofthousands to millions of dollars on their website or intranet amounting to extraordinary investments left to chance and execution on a whim.

Talking about **TECHNOLOGY**, the best social intranets comprise a consortium of social intranet tools: blogs, wikis, user commenting, tagging and forums, to name a few. The results of the Social Intranet Study show a wide range of Intranet 2.0 tools being used in organizations today. The top three are:

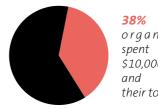




Intranet

commenting 67%

user



organizations spent less than \$10,000 licensing installing their tools

Portal solutions (e.g. SharePoint or WebSphere) are the most popular technology platforms. Almost one half of intranets are powered by a portal solution.

- 44% of organizations use a portal solution.
- 24% use a content management system (e.g. Interwoven or Ektron).
- 15% use a custom-built solution.
- 13% use a hybrid solution.
- 4% use a social media platform.

Microsoft continues to dominate the enterprise collaboration or intranet 2.0 market. For those organizations that have deployed at least one Intranet 2.0 tool, about half have SharePoint (in some shape or form). No other vendor is used in more than 15% of organizations (though some organizations use multiple solutions).



**55%** Microsoft SharePoint (MOSS), the leding tool used



**23%** WordPress (employee groups)



**22%** Facebook (employee groups)

## SharePoint

**SharePoint** is a dominant force in the world of intranet technology. In fact, it's present, in some shape or form, in about 70% of all medium to large organizations (and at least that amount in smaller, knowledge worker-based businesses). It's a powerful platform; but at times hugely frustrating and overly simple.

It's the perfect solution, if you have an abundance of time, patience... and money.

"SharePoint provides enough business value to outweigh the hassles," states the latest Forrester report on SharePoint 2010 (SharePoint Adoption, 2011). In other words, SharePoint offers a lot, but be prepared for many frustrations, and additional expenses.

While the power and feature set of SP 2010 is undeniable, it is more expensive, and more complicated than meets the eye, and fails to live up to a number of key expectations. It is, however, a vast improvement over its' predecessor, MOSS 2007, and is particularly more so for business users such as corporate communications, marketing and HR, who rely more heavily on enterprise content management, collaboration, and portal features.

### FOCUS

Among Gartner's findings that are, in our opinion, reasonable and well supported (note that most of Prescient Digital Media clients use SharePoint, and we at Prescient Digital Media use SP 2010):

### PROS:

- 79% of respondents reported that SharePoint meets IT's expectations
- 54% say that it is meeting technical expectations
- Early successful deployments encourage rapid uptake and use
- Benefits outweigh the problems
- Strong collaboration capabilities
- SharePoint 2010 fills critical functional gaps left by the 2007 version

### CONS:

- Cost (expensive
- Usage (not getting the use as hoped)
- Lengthy deployment (including 2,000 of deployment documentation and hidden features)
- Problematic and expensive to customize
- Often fails to satisfy as a standalone product; requiring augmentation
- Mobile access problems from iPhone Blackberry, Android, etc.

- Not enough expertise / skills to implement and customize
- Technical issues (performance technical complexity)
- Lack of governance
- Functional operation (54% say SP 2010 fails to live up to functional expectations) In their report, Forrester interviewed many companies using SP 2010, and sprinkled in a little of their own analysis that does well to sum up the reaction and adoption of SP 2010. Here are some telling quotes from the Forrester report:
- "We often find that those funding SharePoint projects under appreciate the level of commitment required."
- "Our biggest challenge with SharePoint is finding skilled people."
- "We have 50 add-on products for SharePoint. Some of them are crucial, and some we'll eventually do away with."
- "Customers tolerate a certain level of implementation barriers for strategic initiatives. Once an organization recognizes SharePoint for what it is a strategic platform investment - the expectations change."

Note that the report also finds that 57% of customers have bought third-party tools to augment/improve SharePoint,

particularly BPM, workflow, reporting, and administration functionality. So despite its expense, most are still spending on other, additional products to work in tandem with SharePoint. This is anathema to an all-in-one solution, and rarely is.

SharePoint 2010 gets a thumbs-up when compared to MOSS 2007, but given the cost, gets a failing grade or a bare pass in nearly every other category. It's very revealing to learn 54% of your customers say that it fails to live up to functional expectations; and 46% say it fails to live up to technical expectation.

SP 2010 offers a lot, but it's more than what many organizations need, and less than what still others demand.

The following chart shows the most popular Intranet 2.0 tools in order from most popular (left) to least popular (right). 100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% Blogs Wikis **Discussion Forums User Comments** RSS Content ratings from users **Podcasts** instant messaging Microblogging (Yammer, Twitter) Social Networking (Facebook) **User Videos Vlogs** Photo / Video sharing (Flickr) Social Bookmarking Mashups Tags (keyword Tags on content) not yet but have plans no plans, no interest

some, limited use

enterprise use

none, but considering options

The chart on the left shows the most popular Intranet 2.0 tools in order from most popular (left) to least popular (right). The data clearly shows that instant messaging, blogs, forums, and wikis are now commonplace tools in the workplace. Social networking (employee networking) is increasingly popular and on the rise, and is present in 46% of organizations that have at least one social media tool.

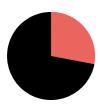
As the technology that powers

intranets continues to improve, intranet vlogs and video-sharing will become more popular.

The following chart instead, depicts the satisfacion of executives and employees. The results show how both of them are less than thrilled with their enterprise social media. A very small percentage of organizations rate their Intranet 2.0 tools as good or very good.

Social media tools are so simple and inexpensive to deploy that it's easy to be lulled into complacency

until the initiative begins to fail. Many don't look beyond the technology and forget about the key role and value that internal communications needs to bring to any new technology deployment: change management, namely communications and education. Often, 2.0 failures are simply a lack of use or adoption by users, sometimes it is misuse of the tools - particularly blogs, discussion forums, and user comments; but rarely is it the technology itself.



28% of organizations rate their satisfaction with their Intranet 2.0 tools quality of content as good or very good



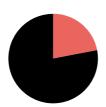
26% of organizations rate their satisfaction with their Intranet 2.0 tools functionality as good or very good



17% of organizations rate executive satisfaction with Intranet 2.0 tools as good or very good



29% of organizations rate their Intranet 2.0 tools' ease of use as good or very good



22% of organizations rate employee satisfaction with Intranet 2.0 tools as good or very good



Only 19% of organizations rate their overall satisfaction with their Intranet 2.0 tools as good or very good

Tackling the three major components of the social intranet (People, Process, Technology) at one time is a challenge, if not improbable in many resourcestrapped organizations. Creating a social intranet is a process that can take significant time, planning and resources depending on your intranet's current state and culture of your organization. Organizations are hitting many roadblocks when it comes to implementing social intranets. Without a proper plan and business case, many organizations will fail to properly acquire and implement social intranet technologies. Those organizations that don't have 2.0 tools will have immense challenges garnering executive approval to proceed if they don't have a detailed plan and/ or business case that convinces senior management of the need. Business cases need not always have hard ROI and other dollardriven targets, but a clear need must be established. Each business case should cite employee needs (research) and external benchmarks and comparisons (competitive and industry benchmarks are preferred).

# **BARRIERS TO SUCCES**

18% lack of executive support

18% Other, bigger priorities

12% Lack of IT support

**10% Policy concerns** 

9% Business case

9% Apathy

10% Other

"

Most current software is focused on general enterprise needs rather than user-specific needs. The opportunity for business and IT leaders is to understand how the individualization of work will affect businesses, critical processes, innovation and interenterprise collaboration.

1 BUSINESS REQUIREMENTS 6 INFORMATION ARCHITECTURE

2 USER REQUIREMENTS 7 WIREFRAMES

BEST PRACTICES 8 DESIGN

4 STRATEGIC PLANNING 9 LAUNCH

GOVERNANCE 10 CHANGE MANAGEMENT

Tackling the three major components of the social intranet (People, Process, Technology) at one time is a challenge, if not improbable in many resource-strapped organizations. Creating a social intranet is a process that can take significant time, planning and resources depending on your intranet's current state and culture of your organization.

### Business & User Requirements, Best Practices:

Documenting your organization's business and user requirements is an essential first step to creating social intranet. Identifying requirements means engaging intranet stakeholders through Focus Groups, User Surveys, and Business Requirements Interviews and other requirements-gathering activities based on intranet redevelopment best practices. First understand the needs of the organization, management, and frontline employees, before developing any plans or designs.

### **Strategic Planning & Governance:**

A Strategic Plan determines the longterm mission, vision, and medium to short-term goals of a new social intranet. Like the strategic planning pyramid, the planning process starts at the top with the highlevel strategic directives such as vision and mission, before defining specific goals, KPIs and governance structure. Effective governance is a mission-critical necessity: define how the ownership structure, including the executive sponsor, committee structures, staffing model, roles and responsibilities of publishers, site owners, etc., and the reporting and approval structure.

### Information Architecture, Wireframes and Design:

Intranet 2.0 tools can't be used if they can't be found. An effective, business-driven design and underlying structure must be developed to better facilitate navigation and usability. Information architecture (IA) is mostly science with a dash of art. As it relates to the intranet, the IA

is best represented by a site map or organization chart of the major information or content categories (parents) and the sub-categories (children) and how they all relate to each other. The ultimate goal of the intranet manager, architect and consultant is to create an 'intuitive' IA with information categories and navigation paths that are intuitive or easily understood at a glance. Of course the principal challenge of any information architect is that what is intuitive to one person is not always intuitive to another. Hiring an outside expert is often a requisite step in creating an effective IA that accounts for all user roles and stakeholder requirements. rather than the biased approach of internal staff that have a narrower vision of the complete solution.

### **Launch & Change Management:**

Selling a social intranet to employees becomes a lot easier when they've been given a voice and understand how Intranet 2.0 tools can make their jobs easier. For many organizations, an intranet makes a fundamental change in

organizational communications, and also, business process. Though the degree of change, and the required change management, depends on the type and culture of the organization (e.g. union or non-union, small or large, etc.) and the intended value and power of the intranet (e.g. self-service, executive communications, etc.), a change management communications program is a requisite for any intranet launch.

The challenge for most organizations is that if there's no prior intranet, or worse yet the intranet is very poor, a new intranet may not inspire much use or it could promote a form of fear or distrust. In short, intranet change management becomes an exercise in "selling" or communicating not only the reason and purpose for the change, but especially anticipating and directly addressing the spoken AND unspoken fears (or apathy) of employees.

## Case Study : Océ

**Océ** has 21,500 employees worldwide in 90 countries with annual revenues of 2.6 billion Euros. Océ's business is document printing, production printing, wide format printing systems and business services (in short, they're in the printing business, and were recently acquired by Canon)

Beginning in September 2008, at the start of the current financial crisis, Océ faced its own crisis: severely declining sales. Layoffs followed and Océ lost more than 500 million in revenue. Revenue and employees weren't the only casualties: the intranet budget was slashed from 350,000 Euros to only 5,000.

cause Océ's communications challenges to evaporate. In fact, Océ had to evolve its communications and intranet challenges in the face of the financial crisis, and they had to operate on a shoestring budget. Rather than rebuild the existing intranet, the intranet team of Ria Breuer, Global Intranet Manager, Jan van Veen, Manager Internal Communications, and Samuel Driessen, the intranet's Information Architect, rolled-out social media tools, and an enhanced corporate news service on the existing home page.

FOCUS



Océ's social bookmarking tool for R&D employee



Océ's social media relies on free, open source solutions and some effective execution by the intranet team. Among the features of their intranet 2.0 arsenal:

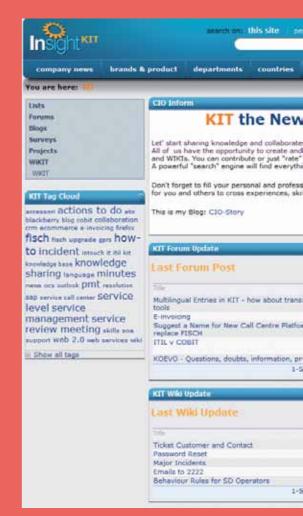
- **Wikis** one for R&D; one focused on corporate information
- **Blogs** 30–40 blogs (very few personal blogs; most are shared/dept. blogs)
- Idea Management a blog soliciting ideas for saving the company money
- **Microblogging** using Yammer
- Social bookmarking employees are learning to share bookmarks instead of circulating emails with links
- **Océ TV** the \$5,000 budget was spent on a video camera and editing software for producing corporate videos

A blog called **Money Making** solicits employee ideas and recommendations for cost savings at Océ. The blog has thus far generated 60+ ideas and one idea was implemented which accounted for 400,000 Euros in savings.

The new intranet of Indesit Company for the IT Department is called KIT and was founded with the aim of further improving the collaboration, the sharing and the exchange of know-how among the employees, 'authors' of the content that will be made available to all other employees in the network. The project is designed to create an environment that will provide operational support through collaboration spaces, customizable and responsive to the needs of the team. In the true spirit of an enterprise 2.0 project, the name of the new intranet, Kit, was proposed and chosen by users themselves. A space to encourage the process of knowledge, integration and collaboration between employees.

Indesit Company is the second largest manufacturer of household appliances by market share in Europe and the fifth in the world, with a turnover of over 3.4 billion euro, 17 plants and 24 sales offices worldwide. The company, which today employs more than 17,000 people manufactures washing machines dryers, washer-dryers, dishwashers, refrigerators, freezers, ovens and hobs under its main brands Indesit, Hotpoint-Ariston and Scholtès. The attention to human capital and professional is at the biasis of this project with which the

company aims to involve all employees in the belief that the processes of individua knowledge and exchange of know-how is an important corporate asset and represents opportunities of human and professional enrichment



On the home page, the top contributor and the latest Article added.



the top rated, the most viewed and the most common contents are shown

characteristics of collaboration and is in continuous evolution. All services of KIT are integrated in a web interface that can be used by every user who wants to 'meet' others and share experiences, knowledge, projects and ideas.

### **Social networking functionalities**Personal & professional profiles

It is the first real killer app for an intranet 2.0 in a collaborative environment because people search first of all for people. Besides the information to be tracked (location, phone number, e-mail) and the user's photo, the personal profile shows skills and personal interests or projects that users are working on. On home page the CEO invites you to enter your own personal profile and underlines the importance of sharing experiences and knowledge to have vision of existing skills in the group and use them to optimize internal resources. Making own skills public, so they can be used, gives each user the chance to see its value recognized and sets the stage to highlight work affinity and community of practice, facilitate team-building and to create syneraies

Search: the feature is "customized" and the search results are ranked according to the user's choices: eq. by author, format type, etc.

Rating: allows to express his approval of any type of content contextual object.

Tagging: you can publish and track all content by combining with keywords. The tag is the cross to all content types (blog, wiki, etc.), ensuring the completeness of search results

Ranking: constant monitoring shows the most used contents and areas visited, reveals preferences and measures participation.

### **Content generating features**

forum and Blogs (blog sites): are areas for discussion and comments organized by category; each user is free to create. Wiki: allow simple, efficient and flexible collaboration thanks to an advanced editor that encourages the use and facilitates the generation of content. Wikis streamline workflow, centralize the information in one place and reduce the need of e-mail, avoiding the risk of missing updates and versions of documents.

Project site: contains all information about a project, the participants and the shared activities. Who has the permission to create the project site defines who is allowed to access and "participate" in the website (also external partners allowed).

Over the years Marche Region has worked as an aggregator of collective pluralities, adopting policies aimed to improve and integrate processes and ensure efficiency in services. With this focus, Marche Region he has recently created a cohesive intranet space: "POINT 2.0" implements more tools and functionality of user participation and can provide new features to support the daily activities of employees, promoting communication and collaboration

"The efficiency of our organizations depends on the actual capacity of people to work synergistically in the network, adopting systems of shared knowledge that are easy to use.

The ICT provides tools for enabling the achievement of this purpose and represents a determining condition of expansion of the creative and social potential, beyond the normal limits of interaction in space and time."

Andrea Sergiacomi

P.O. Design, development and management of Web portals and front-office systems

### The Needs

The project was born to create a system of shared services, able to respond to the

organizational needs of the entire body, to the need of promoting the sharing of information, collaboration and agility in the management of processes, the internal and external communication.

Cropped on daily needs, the developed solution is based on the areas of Institution, Communication, Organization, Services to the employees and other sectors dedicated to specific regional structures. It configures itself as an intuitive field, with easy access and use, ready for future development and meant to simplify the processes and increase efficiency in the management procedures. The system also guarantees a decrease of repetitive actions by the IT.

### The Solution

The project was carried out in collaboration with Metisoft, parter of Microsoft with certified Gold in Portal and collaboration, and years of experience in the realization of intranets based on the SharePoint platform.

The new intranet is called "POINT 2.0": the name is inspired by the prerogative to represent a single point of access to all systems and content of the Agency, yet implementing more tools and functionalities of user participation.

access to services for an authenticatior integrated with the regional Fed Cohesion Identification system was predicted, based on the marchigian CNS "Charter Raffaello", already supplied to all employees.

### Services:

have been structured and automated. to centralize in a common calendar all based on selection parameters, such as service that speeds and simplifies many requests previously managed on a paper. The profile of the employee, on the personal site, is enriched by information related to the organizational structures to which it belongs to strumental goods entrusted. Finally, accessing the home page in autenticated modality, each user has the option of being notified - through indicators recalling a "social network" graphic style - with pending situations, such as communications received and not yet read or required permits yet to authorize, coming from third-party business systems made interoperable.

### Communication:

A section of the intranet POINT is a confidential communication and is organized as a centralized publishing system. News, press releases, announcements, events and institutional campaigns published on the intranet under specific employee's request, - If prior permission from those responsible for communication - can be, in fact, automatically posted on regional websites and blogs targeted outside. This feature. This Integration with external systems is in strong expansion and is planning to be enriched soon with further connections to social networks.

such as Facebook and Twitter, in order to become a real editorial dashboard of all the information of the organization.

### The Benefits

The new intranet is born from a migration to the SharePoint platform: the technological adaptation has allowed to evolve the basic functions already present for the document or content management, encouraging usability with a graphical interface and access to functions close to those client applications already known to users.

The new features have produced

- increased user proactivity towards the use of the intranet and centralization of communication space on Web compared to other massive flows, such as information exchange via distribution lists by email;
- better organization of Individual work: Point represents a unique access interface and first-Entity authentication systems, as well as providing notification of all major pending activities;
- improved intra-company collaboration and communication and an increase in the amount of available information for the user, on the one hand in virtue of a better organization interface, on the other thanks to features of the new

### search engine;

- efficiency due to the streamlining and automation of processes (booking goods and business resources, permissions, etc.).
   thanks to the availability of entirely digital flows and interchange of data and electronic forms rather than paper;
- a reduction in approval times and management of more popular and activated internal processes.

2.4

How employees communicate & collaborate in the 2.0 company

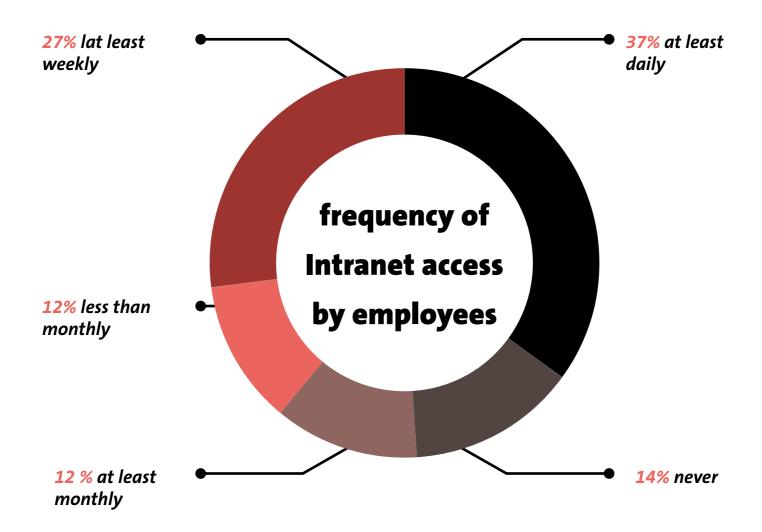
A company intranet is defined in several ways by researchers. Some of them take an information technology point of view speaking about "applications" while others see it with the eyes of co-operators and rather describe them as knowledge-sharing networks.In fact, an Intranet is also one of the employee publications that play an active role in sharing information and knowledge among employees and units worldwide. More precisely, intranets create an opportunity communication two-way in order to generate employee feedback, questions, and concerns in terms of inviting questions, seeking input and comments, as well as conducting surveys, and finally, reporting the results. Troy (1988) gave more than twenty years ago six key roles for effective internal communications in time when intranets were very rare internal communication channels. Nevertheless, we can say that those roles - 1) to improve morale and foster goodwill between employees and management, 2) to inform employees about internal changes, 3) to explain compensation and

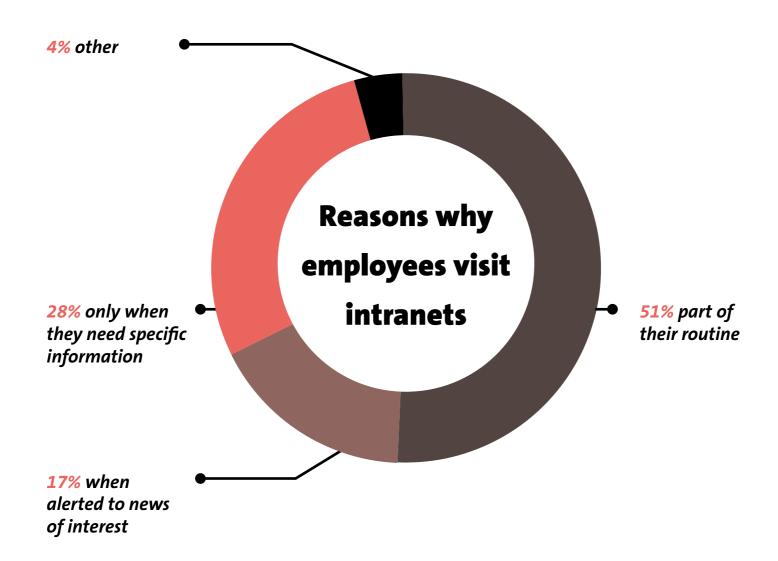
benefit plans, 4) to increase employee understanding of the company and its products and organisation, services. ethics. culture, and external environment, 5) to change employee behaviour to be more productive, quality oriented, and entrepreneurial, and 6) to encourage employee participation - are all played by today's intranets, thus leaving a minor importance to other internal communication channels, such as personnel magazines, face-to-face meetings or e-mails.

For example the company Starbucks does not use its intranet merely as a communication channel but also as a core business tool that streamlines business practises and provides a means of business management. This intranet also provides a place for the most current reference information on human resources and its procedures. Despite that, it acts as a daily messaging channel to help drive the business effectively while it provides two-way communication for quick surveys and rapid feedback from employees. Multinational companies, convinced of the great advantages the intranet offers in internal communication, have been building and developing intranets at an increasing pace during the past two decades. In fact, we can say that intranet is the most important source of internal company information at the moment. It has superseded face-to-face meetings and e-mail correspondence in internal communication. There are companies - IBM among others where the intranet has replaced the traditional co-worker grapevine and immediate supervisor as the preferred and most credible source of information for employees.

Nowadays, employees seem to be more comfortable accessing information electronically. They still rely on their managers for direction and interpretation, whereas intranets are displacing managers' role as human filing cabinets.

More than half of the employees wants to use an intranet as a communication tool, but not to the exclusion of other channels. Faceto-face channels are still the most preferred type of communication at organisations with less than 5,000 employees (43%), and electronic





channels are preferred more at medium and large companies (42% and 43% respectively). Employees at middle-sized organisations instead, prefer their intranets more than publications and supervisors. When more people have access to online sources, they are more likely to prefer them as primary sources. The preferences of information sources depend on the working places and the level of their technology, too. Electronic sources are more greatly preferred by officeintensive followed organisations, by manufacturing companies and companies with many employees working outdoors. The preference for electronic sources among office-based companies was about 50% higher than among those with many employees working outdoors. The survey of Schleimer and Riege (2009), carried out at BMW, gave somewhat contradictory results. Despite the existence of a digital portal for marketingrelated knowledge, most managers perceived BMW's marketing portal on their intranet the least effective communication channel compared face-to-face communication,

telecommunication, and e-mail systems connecting different units. One reason was that context-specific local or regional knowledge was rarely applicable to other units. Additionally, the intranet was generally a one-way knowledge disperser used solely by central management and leading markets, such as the German and UK markets to inform other units located in smaller markets.

Only 35% of employees actively look at their intranets at least once a day and another 27% at least weekly. More than one-fourth of employees either never looked at their company intranet or accessed it less than monthly. Estimated two thirds of the employees used the company intranet at least daily and the rest of them at least weekly.

If we investigate why employees go to their intranets, a research shows that about half of employees access intranets as part of their regular work routines. The other half of them goes there only when they have a need - either when prompted by the company or when they want to visit the site for their own reasons. As many as 58% of

those who never visited the intranet said they did not have time to visit it. Another one-fourth of these people said the main reason was that either it was too difficult to find information on the intranet or they did not know how to access it in the first place. Finally, 15% thinks that the intranet was not relevant to them.

Nowadays, the corporate intranet should be the first place where employees look for company information as it is a hub for information, collaboration everyday work. Nevertheless. according to the study Intranet Strategies Today & Tomorrow conducted in 2006 by McConnell, few organisations have achieved this degree of relevance in their intranets. The results revealed that intranets are used to distribute information but, to a lesser degree, increase productivity and facilitate collaboration. Half of the respondents polled 'absolutely' to the statement "The intranet is perceived to be the primary means of delivering information to where it is needed within the organisation". Only 20% 'absolutely' said

"a collaboration it being to platform, innovation trigger and knowledgesharing tool", while 19% called it "a productivity tool."

The main reason for a company to implement an Intranet is to keep the company together by giving relevant information to the employees and improving their possibility to share knowledge, allowing them to work more professionally and efficiently. Moreover, the company intranet should be used more effectively in strategy communication as functionalities of intranets enable

sharing of exactly the same contents and quality of strategy communication within the whole company, among all its employees. Strategy communication work communication supporting about strategy-related changes in the organisation and its structure.

can be enhanced through the intranet, comprises of everyday employees in their tasks so that activities are aligned with the strategy. Furthermore, the intranet is a perfect channel to communicate processes and working practices as

61% The intranet is the primary means of delivering information to where it is needed within the organisation

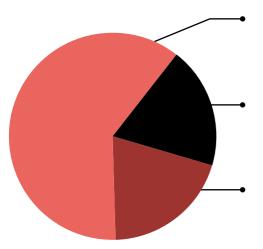
19% The Intranet is a productivity tool

20% The Intranet is a collaboration platform, innovation trigger and knowledgesharing tool

well as to collect ideas and feedback from employees.

The conclusion is that the importance of intranets has been growing in most multinationals even if the intranet has not totally replaced the other, more traditional, internal communication channels. With improved technology and better access to the intranet, more companies will definitively use it not only as an "electronic pinboard" or information archive but also as a forum for collaboration and knowledge sharing in everyday work in the future and potentially the most important internal communication and collaboration channel

As the results of the present diagram reports, only 20% of employees of companies with intranet access think that intranet is a collaboration platform, an innovation trigger and a knowledgesharing tool. This is because the present intranet tools, as much as they can be developed and restyled, still lack of that usability and intuitiveness that now all modern social media (e.g. Twitter, Facebook) offer.



The oldest members of the networked generation - also known as Gen Y or the Net Generation - are in their early 30s. They're assuming management roles. They're making increasingly consequential business decisions and they're networked 24 hours a day, seven days a week. Being connected to their networks is as natural to this demographic as using the telephone is to older generations. Taking it away makes no sense to them. But it's not merely a matter of acquiescing to the employee expectations. Smart companies recognize that perpetually networked employees are symptomatic of a larger change taking place in business. These companies will figure out how to turn this new workplace reality to their advantage. Doing so requires that leaders take several actions:

- Ensure policies are in place and well communicated, spelling out employee obligations and accountabilities when they're engaging in social media at work. Nobody should ever be surprised when someone is disciplined for violating guidelines.
- · Improve business literacy in your

- organization so employees are wellequipped to talk about the company. They may not be official spokespersons issuing statements of record, but they can still represent the organization well and drive sales and customer loyalty through their normal, day-to-day interactions.
- Offer training on social media so employees know the right way to use it. That's what The Mayo Clinic does with its employees, resulting in even better returns on employee engagement in social networks.
- Providing employees with access to social media at work - and in the becoming process а more networked organization - will increasingly become a success factor for organizations. Better to figure it out now than to be left in the dust of your competitors who already have. Giving employees seamless access to business apps regardless of location and time increases productivity and supports collaboration with employees, partners, customers. Such apps also help virtual teams work cohesively and interact effectively, giving them instant access to the information they need. Knowledge management

and collaboration platforms have become critical, allowing project docs to be stored centrally and accessed easily, and letting teams collaborate on changes, viewing and sharing files in real time.

# **Communication & Collaboration**

### Revolution

Multiple sources of information Silo'd Inboxes

**Personal Dashboards** 

iGo

iGoogle
netvibes

Static Corporate
Directory &
Personal Contacts

**Social Networks** 





Local "Office" documents

Workspaces: Wikis, Blogs, and shares online spreadsheets





Email & instant Messaging

**Social Messaging** 





Outside of the company's world, each one of us uses at least a social media application installed on leptops, smartphones or pads. It has become almost impossible to avoid to use of these tools to communicate and share our lives with others, because they help us to stay connected, erasing the barriers of distance. As the number of these services increases and upgrades in terms of ease of use, speed, user experience and style, the users get more and more used to this level of interfaces, information architecture and usability. This means that at the same time users start to see the difference between these applications and those who did not follow the evolutionary stream. evolving, innovating and investing in user firendlyness.

If the daily life we can choose to uninstall an application that doesn't satisfy us, in the company's routine, users are forced to confront themselves with poor applications or tools, that often do not satisfy all their needs in one and are not up to date. This is why slowly, new applications are emerging, entirely inspired to modern social media.

### Slack

At its core, Slack is a team communication tool, a robust chat room. And it's taken on a multi-dimensional role for thousands of teams. One of these roles is as a link sharing/collecting hub.

Teammates drop fun and interesting links into one of the chat rooms for others to check out.

It can be a great way to bubble up great content to fill the company's social profiles.

### Slater

It's described as "Buffer for Slack."

### **Point**

One of the best article sharing tools, a chrome extension that lets you share stories with your team from any page you're on.

With the extension installed, you can type the "@" key on any page you're visiting, and this brings up a simple sharing box where you can add notes and send to different people on the team.

Also, you can highlight parts of the article you share, and you can find all your history of shared links easily in the Point popover.

### Pie

A clean and simple solution for communicating together on social media ideas is Pie, which helps with work chat and focuses on simplicity. It can get set up quickly by adding teammates from your email contacts, and enables us to share and store content ideas and tips in an easily searchable system.

### Trello

Trello is a favorite remote work tool. It's meant for organizing blog post ideas, bugs, team task forces, projects, social media content board and more. It's good to work together on social media content and to drop in interesting files, images, memes, questions, and links inside.

This allows e.g. the social media manager to pull from a rich, diverse repository of content.

### Messenger

Facebook Messenger, previously a feature within the Facebook social network, is now a standalone app and website. You can send messages to connections and groups on Facebook through a slick and simple interface.

### Wrike

A full-featured social media management app, Wrike helps organize campaigns and projects, assign tasks, share ideas, and followup on progress. The dashboards support huge teams like PayPal and AT&T and also provide free plans for teams of 5 or fewer.

### **Dropbox**

For file sharing of all kinds social media images, strategy spreadsheets,in progress documents, videos, slidedecks, and more - many teams turn to Dropbox. On the free individual plan, you can share folders and files with colleagues as if you were all working from the same, shared desktop. Dropbox also offers a business plan for those who need the extra storage space (terabytes), helpful revision history, deeper admin controls, and more.

### **Google Drive**

you can collaborate together, live, on the same documents, spreadsheets, and presentations.

### Canva

Need some advice from your team on a social media image you're creating? With Canva, you can share your in-progress images with anyone via email, and others can combine forces with you to design together on the same graphic.

### **Post Planner**

Post Planner helps you find the best posts to share on Facebook, with a research-backed recommendation engine and a full image library, not to mention a queue schedule and the ability to work together with teammates.

Plans start at \$7/month, or \$15/month and up if you're interested in collaborating with one or more teammates.

### **Basecamp**

Basecamp is one of the best project management apps out there, and social media campaigns are a natural fit as projects to manage. You can create your social media project in Basecamp, track progress with a to-do list, comment and share together in the discussion section, and stay on track with the latest happenings with project updates.

Basecamp is free to try for two full months, and plans start at \$20/month with unlimited team members.

### **Tweetdeck**

This Twitter management tool (the official one from Twitter) now lets you invite contributors and admins to share to your Twitter account for you, via Tweetdeck.

You invite as many team members as you'd like and manage their roles as admins or contributors.

#### Mention

Super useful for tracking and monitoring when your brand is mentioned on social media, Mention also lets you listen in as a team, with full access for team members to your brand's mentions. With this, you can then split up your tasks of follow-up—send a teammate to reply to Twitter, assign a Google+ thread to another.

Slack isn't just another office collaboration app. The company has been called, "the fastest-growing workplace software ever." Recent press reports claim that "users send more than 25 million messages each week," and that the company is, "adding \$1 million to its annual billing projections every six weeks."

Smelling an opportunity, investors just plowed \$120 million into the company giving it a \$1.12 billion valuation.

"Our subscription revenue is growing about 8 percent monthly, before we add new sales," says Slack's business analytics lead Josh Pritchard. "This is, as far as know, unheard for an enterprise SaaS company less than seven months after launch"

Perhaps even more surprising, Slack's user retention stands at an astonishing 93%.

How does Slack get its users hooked?
On the surface, no single factor seems to set Slack apart from a plethora of other online collaboration tools However, a closer look using the mode described in the book Hooked: How to Build Habit-Forming Product, reveals the user psychology behind the company's success. A habit is an impulse to take

an action automatically, with little or no conscious thought. Slack's ability to quickly form a habit could be the key to the company's tremendous customer loyalty and high engagement. Slack leads users repeatedly through a cycle called a "hook."

The four steps of the hook include a trigger, action, reward, and investment and through successive passes through these hooks, the new habit is formed



The Hook model: Trigger, Action, Variable Reward &

### The Slack Habit

The Slack team understood that it is much easier to displace an existing habit than to create an entirely new one. Slack doesn't try to radically change user behavior. Instead, it makes existing behaviors easier and more efficient. Slack also meets one of the most important prerequisites required to form a new habit: the key behavior occurs frequently.

The company says the average Slack user sends 40 messages a day. Habituated users send twice as many.

Slack's Triggers Are a Cue to Take Action:
Users keep Slack open all day on a variety
of devices and receiving a notification
prompts opening Slack. Pritchard says,
"It becomes a way of saying to your coworkers 'I am at work and I am available."
The company has focused on making
Slack easy to use when on the go. Slack
user James Gill said, "I personally have
found myself catching-up on things
much more from my phone now than I
ever did before."

Though Slack clearly utilizes effective triggers in its own product to get users checking the app, don't all those notifications overwhelm people? How can a company with the slogan, "Be less busy," avoid perpetuating mindless multi-tasking with each new ping? The key appears to be how Slack helps workers avoid other distractions. Teams often use multiple tools in their work - Asana for project management, Github for version control, and Dropbox for files - all the while receiving notifications and reminders from those tools via email. However, all these messages and notifications can clutter a worker's

day, especially when they are received and processed in the same email inbox they use for all their other messages. Combined with all the interoffice chatter we send back and forth through email and we soon find ourselves in the email deluge we swim in today.

Slack provides shelter from the storm.

By offering a centralized hub for team communications, including the information streaming in from work-related tools, professionals reduce distraction from the irrelevant messages bombarding their email inbox throughout the day. "Anything in Slack is internal," says Slack user Jamie Lawrence. "Anything in my inbox should be external."

Slack acts as a protective shield focusing user's attention on what's important by reducing irrelevant triggers.

### Slack's Action and Rewards.

By focusing on only the triggers that matter and by making it easier for users to respond through any number of devices, Slack increases the likelihood of the user taking the key action - opening the app. The next step in Slack's hook is the reward. Slack taps into team members' need to feel included as well as their fear of missing out on important work-

related information. Like any number of social media apps and sites, Slack provides variable rewards to its users in the form of new tidbits of information or approval from their peers, which arrive at unpredictable intervals. Intermittent rewards are endemic to all sorts of habit-forming apps and products. In fact, Pritchard says the product reminds him of his former employer, "My time at Slack is definitely ... reminiscent of early Facebook." he says.

### Investing in Slack

The final step of the hook is the investment. Here, users put in a bit of work into the product to make it more useful and therefore increase the likelihood of using it in the future. Users invest in Slack in multiple ways:

inviting colleagues, sending messages (which then become part of the searchable archive), adding integrations with external tools and of course, eventually paying for the service. Slack understands the power of getting users to invest. In fact, whereas most enterprise tools offer limited features during free trial periods, Slack holds almost nothing back. The company wants to maximize usage and therefore opportunities to form the Slack habit. The only difference

between Slack's free and paid version is the quantity of messages that can be searched and the number of external tools which can be connected. By the time companies need this functionality, their teams are already hooked. Habitforming apps make it as easy as possible for users to invest. Persuading users to pay, for example, is often a challenge for a previously free tool. However, Slack found a way to overcome some users objections to ponying-up. Pritchard said, "teams will not be charged for inactive users. This seems to significantly reduce the cognitive friction in the purchase process."

Slack's 30 percent conversion rate from free to paid customers is one of the highest in the enterprise business.

Slack makes the path from new to habituated user as smooth and as swift as possible. It effectively triggers checking the app, delivers immediate social and information rewards on an intermittent basis, and prompts users to invest by adding colleagues, content and eventually cash.

"

Traditional market research, Research 1.0, was designed to work in yesterday's world, where suppliers, customers, and employees were all kept at arm's length. In a participatory world, new techniques need to be developed, which work with the powers of collaboration, rather than the out dated concept of command and control.



The first rule of social media is that everything changes all the time... What won't fade is the community's desire to network. The companies that provide social networks are just the venues.

# THE CASE STUDY OF VOLKSWAGEN AG

## 3.1 Introducing Volkswagen AG

- 3.1.1 History and scenario
- 3.1.2 Products, market, location and employees
- 3.1.3 Issues every big company has to face

# 3.2 The company's working culture and language

- 3.2.1 Existing collaborative applications and services
- 3.2.2 The case study of Group Connect

Introducing Volkswagen

"

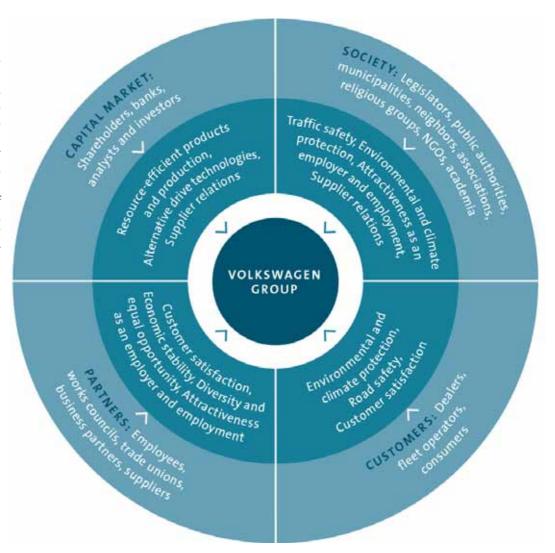
It takes time to change the culture of a company that is deep-rooted.

Sometimes in a situation like this, you just need different thinking - I don't say better or worse thinking, just different thinking - to give a signal to the internal organization that we need a different approach

### 4.1.1 History and scenario

### Introduction

The Volkswagen Group (VW), founded in the 1930s and headquartered in Wolfsburg, Germany, is one of the world's leading automobile manufacturers and the largest in Europe. In 2013 the Group increased thenumber of cars and commercial vehicles delivered to customers to 9.73 million, which equates to 12,8% of all cars sold worldwide. The Group's sales revenue totaled € 197,007 million in 2013, while profit after tax came to € 9,145 million.



### Structure

The Volkswagen Group is a publicly quoted stock corporation under German law and owns twelve brands from seven European countries: Volkswagen, Audi, SEAT, SKODA, Bentley, Bugatti, Lamborghini, Porsche, Ducati, Volkswagen Commercial Vehicles, Scania and MAN. Each brand has its own distinvtive character and operates autonomously in the marketplace with its own legal status. In its function as parent company, Volkswagen AG holds direct and indirect interests in Audi AG, SEATS.A., SKODA Auto a.a., Scania AB, MAN SE, Dr. Ing. h.c F. Porsche AG, Volkswagen Financial Services AG and numerous other companies in Germany and abroad. These include Volkswagen do Brasil, Volkswagen of America, Volkswagen of South Africa and the joint ventures Shanghai - Volkswagen and FAW (First Automotive Works) - Volkswagen in China, to name the largest national companies.



























### **VOLKSWAGEN FINANCIAL SERVICES**

AKTIENGESELLSCHAFT

# 123,000 PEOPLE

In Group and brand surveys in 2012 and 2013, customers, managers, employees and representatives of non-governmental organizations, academic and political circles provided feedback on their expectations in terms of sustainable business practices

# KEY TOPICS FOR THE VOLKSWAGEN GROUP ARE:

Employer attractiveness and
employment
Environmental and climate protection
Economic stability
Customer satisfaction
Resource-efficient products
and production

No. 1

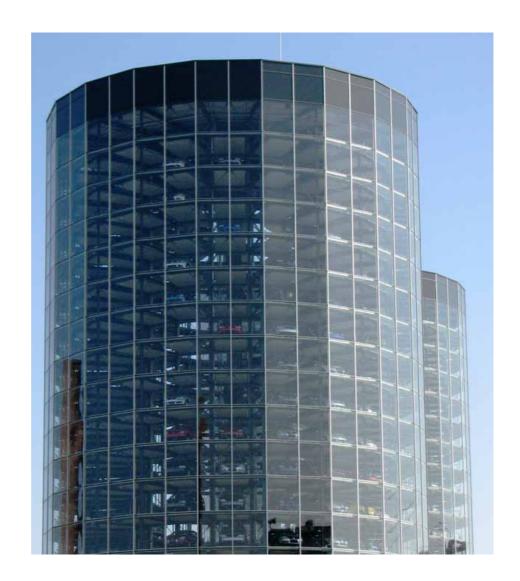
in the Dow Jones Sustainability Index means the Volkswagen Group is global sector leader in terms of sustainability



# **4.1.2** Products,market, location and employees

### **♯** Products

The Group's product portfolio ranges from two-wheeled transport and economical compact cars to luxury high-end models. In the commercial vehicle sector, the range starts with pick-up trucks and extends all the way to busses and heavy-duty trucks. In other business areas the products manufactured include large-bare diesel engines for marine and stationary applications, turbomachinery turbochargers, (steam and turbines), gas compressors and chemical reactors. The portfolio also includes special gear units for vehicles and wind turbines, slide bearings cuplings, as well as testing systems for the mobility sector. Through Volkswagen Financial Services AG the Group provides products and services in the financing sector to private and corporate customers, as well as extending its range of integrated services focused on new mobility concepts.





### Markets

The Volkswagen Group sells its vehicles worldwide. The Group's share of the passenger car market in Western Europe reached 24.8% (2012: 24.4%), in Central and Eastern Europe 15.7% (15.2%), in North America 4.8% (4.9%), in South America 17.0% (19.5%) and in Asia-Pacific 12.9% (12.2%).

The Group's worldwide market share totaled 12.8% (12.8%). The largest sales market for the Volkswagen Group is the Asia-Pacific region, followed by Western Europe, North America, South America and Central and Eastern Europe. Worldwide, for the manufacture of its products, the Group purchased goods and services to the value of €135.0 billion (previous year: €128.7 billion). The largest procurement market is Europe, with a volume of €87.9 billion, followed by the Asia-Pacific region with €31.9 billion.





### Location and employees

The Volkswagen Group operates 106 (2012: 99) production facilities around the world. Europe forms the core of the Group's production activities with 68 vehicle and component plants. The significance of the Asia-Pacific region is increasing, reflected in the current total of 22 production plants. In North America, the Volkswagen Group operates four production facilities, with nine in South America and three in Africa. Around the world over 570,000 employees produce approximately 39,352 vehicles per

working day or work in other fields of business.

The 95% of the production is automated, thus highly centrally controlled by the IT department.

# INVOLVING **EMPLOYEES**



More than 450,000 employees were invited to take part in the "Stimmungsbarometer" opinion survey in 2013. This sixth survey covered 121 locations and companies in 40 countries. Over 400,000 employees provided feedback. The employee satisfaction index during the reporting year was 79 out of 100

# QUALIFICATION

Throughout their working lives our employees are qualified within the "Berufsfamilien" (professional families). One key underlying principle here is knowledge transfer from our own experts. Qualification follows the dual model, which involves close coordination between theory and practice

### 572,800 EMPLOYEES WORLDWIDE



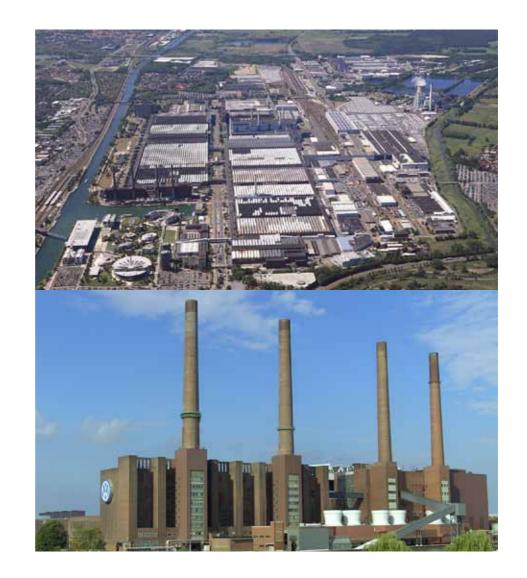
# 4.1.3 Issues every big company has to face

### Working in Volkswagen

Volkswagen's headquarter is located in Wolfsburg, Germany and counts about 55.000 emplyees.

The several departments are distributed mainly in "Das Werk" or "Volkswagenwerk", where the ideation, development and production takes place. Some other departments are instead distributed in separated buildings inside and around Wolfsburg.

Volkswagen works with additional external companies or agencies that play an important role when it comes to unique professional tasks that require experts and quick task development. Every single department is in charge of a specific field of interest as for example the Logistic, the Research and Development or the Information Technology department. The IT department has its offices in the beautiful Mobile Life Campus building (see pictures on next page), located outside of "Das Werk".which hosts also the UX Center of Excellence, the Service Innovation and many other teams who bring the Innovation to the heart of the worldwide known enterprise.





# Problems related to the size of the company

Seeing the size of the headquarter, it is easy to imagine how difficult it is to communicate between departments and to know exactly who is doing what and which the ongoing projects in VW are.

The problems related to the size of the company, such as the collaboration and the communication need therefore to be solved and controlled in a precise way and through accurate working solutions and tools.

### Main issues:

- 1. Organization, management
- 2. The single employee's need
- 3. Communication
- 4. Efficiency and control
- 5. Workspace
- 6. Change

### Consequences:

- 1. Hierarchy necessary
- 2. Satisfy the statistic majority
- 3. Doubled work (waste of money/time)
- 4. Routine and slowness
- 5. Standardized
- 6. Risky

4.2

**Volkswagen's working culture and language** 

"

We want to make a good team into a top team, with employees who have the skills and motivation to perform to the highest level, enjoy their job and are moving steadily towards the very top.



# **SEARCH & FIND EXPERTS**

### **QUESTION TO COMMUNITY**

### Do you have any experience with technical translations?

09.05.2014 14:34

### Hello dear community,

I would like to translate my applications into different languages. In terms of software, I am very well equipped. I need is someone to do the actual work. I need translations in Spanish as well as English. Which partners (international) do you use to get your translations done?

I am looking forward to your replies.

Kind regards from the MLC.

### FIRST CORRECT ANSWER WITHIN ONLY 9 MINUTES

Re: Do you have any experience with technical translations?

Og.05.2014 14:43 (als Antwort auf:

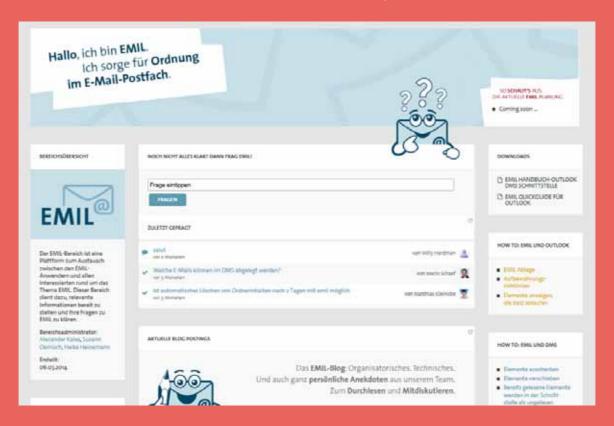
Hello

You can send your assigment to the internal translations centre (VWAG R: AUFTRAG UEBERSETZUNGEN). For do so, you need to classify your documents as "public", "internal" or "confidential" in advance.

Best Regards.

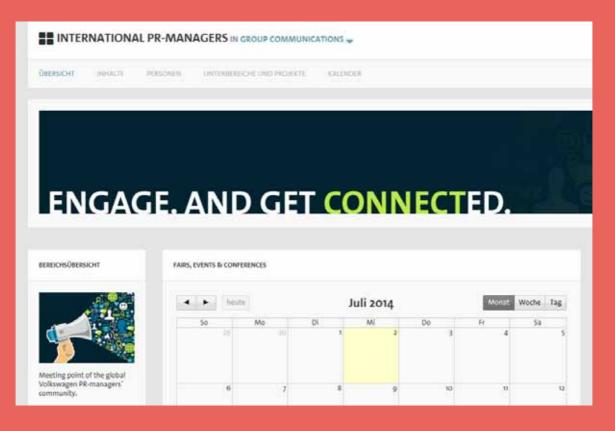
# **ONLINE SUPPORT**

# EMIL - THE NEW ARCHIVE FEATURE IN MS OUTLOOK: ONLINE SUPPORT IN CASE OF QUESTIONS



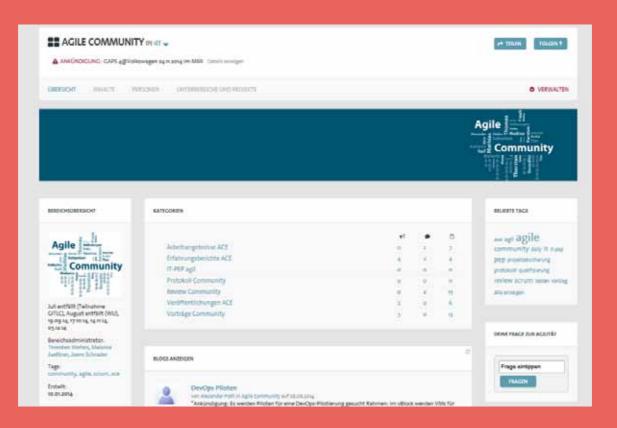
# **GLOBAL COLLABORATION**

100 PR MANAGERS AROUND THE WORLD COORDINATE THEIR MEETINGS, TRADE SHOWS AND AND PRESS STATEMENTS VIA GROUP CONNECT

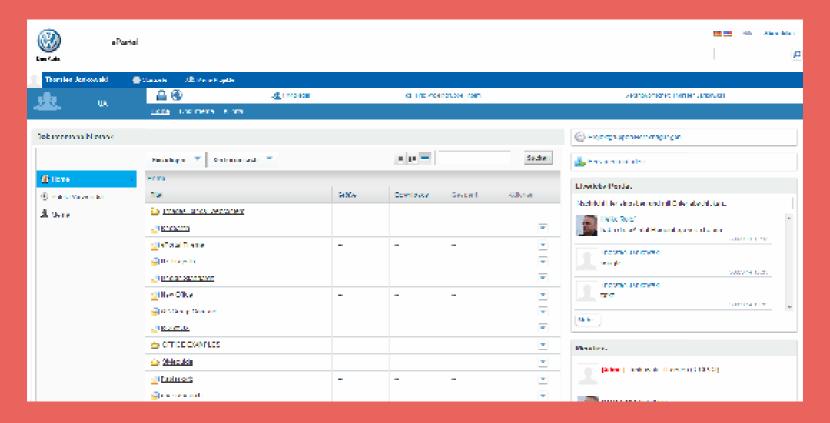


# HORIZONTAL COLLABORATION

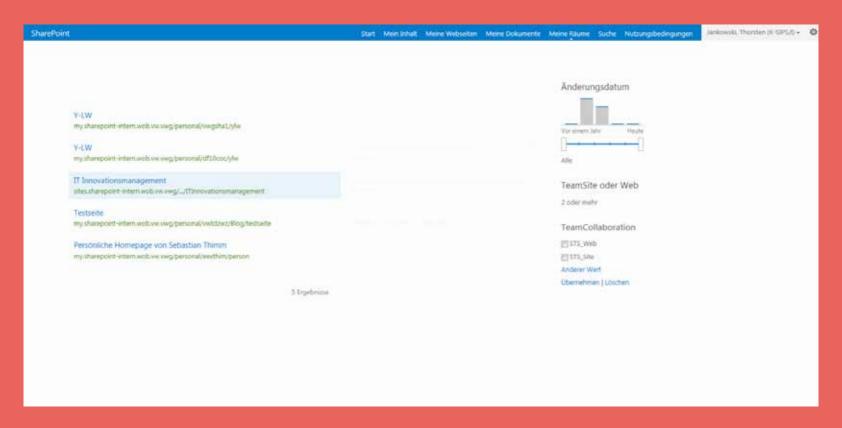
# AGILE COMMUNITY - A VIRTUAL SPACE FOR A PROJECT TEAM OF IT EMPLOYEES AND MEMBERS OF OTHER BUSINESS UNITS



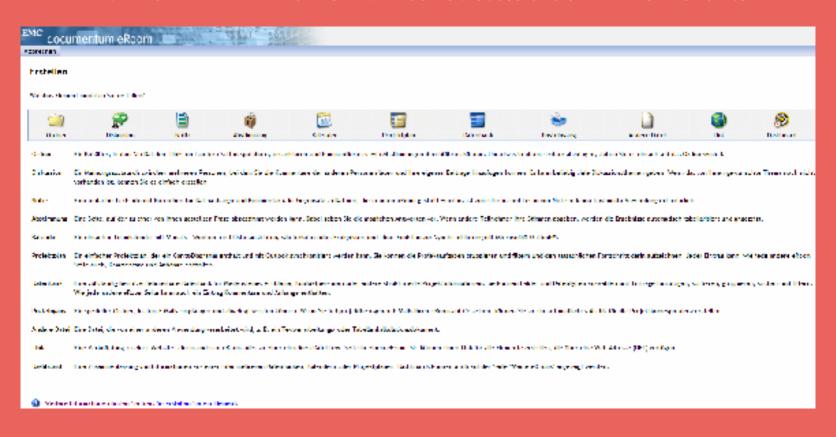
# EPORTAL - AN INTERN WORKING PLATFORM WHICH FACILITATES THE INFO & DOCUMENTATION EXCHANGE BETWEEN INTERNAL & EXTERNAL PARTNERS



# SHAREPOINT- AN INTERNAL WORKING PLATFORM WHICH FACILITATES THE INFO & DOCUMENTATION EXCHANGE BETWEEN EMPLOYEES. SIMILAR TO DROPBOX



# EROOM- AN INTERNAL WORKING PLATFORM WHICH FACILITATES THE INFO & DOCUMENTATION EXCHANGE BETWEEN EMPLOYEES AND TRIGGERS DISCUSSIONS ON INTERESTING TOPICS



# HACKATHON- AN AGILE AND QUICK SOFTWARE DEVELOPMENT PROGRAM TO GET TO SMART SOLUTION IN SHORT TIME



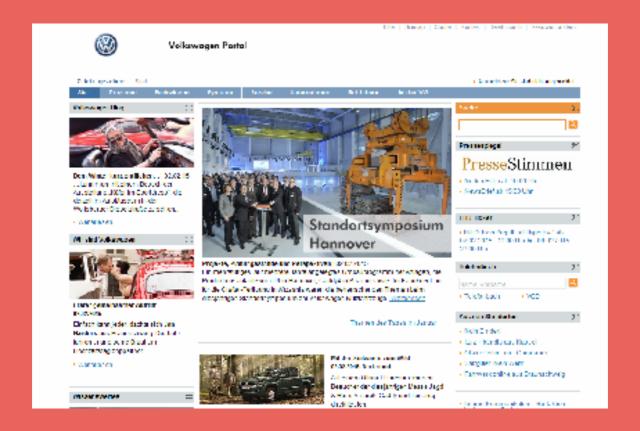
# INTERNAL COMMUNICATION

**NEWSLETTER 2.0** 

THE "GROUP IT NEWSLETTER SPACE" REPLACES THE OLD PDF NEWSLETTER BY FEATURING INTERACTIVE CONTENT



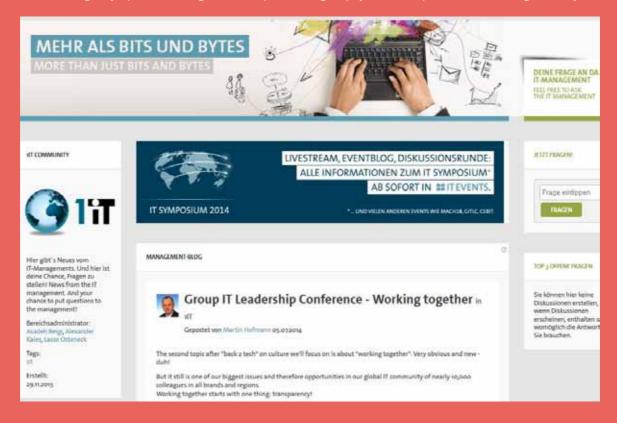
#### VW PORTAL - EVERYTHING YOU NEED TO KNOW ABOUT VOLKSWAGEN GROUP



## TOP-DOWN & BOTTOM-UP

#### THE "1IT" COMMUNITY - CONNECTS ALL IT THE EMPLOYEES WORLDWIDE

Dr.Hoffman regularly reports interesting news on his personal blog. Employees can ask questions to the management anytime







HOME III

INHALTE

PERSONEN

GRUPPEN

SUPPORT

**ERSTELLEN** 





#### **EMPFOHLENE BEREICHE**

#### III

Hier gibt's Neues vom IT-Managements. Und hier ist deine Chance, Fragen zu stellen! News from the IT

## **Group Connect-Plaza**

Austausch und Diskussion für alle Group Connect-Nutzer. Exchange and discussions for all Group Conne

Information about / Informationen über Group Connect

**NEU DABEI / NEWEST MEMBER** 

Suche

# ALLE INFORMATIONEN ZUR I MITARBEITERVOLLVERSAMMLUNG AB SOFORT IN ##ITEVENTS.

nanagement. And your chance to put questions to the management!



ct-User.





# GROUP

#### Introduction

Group Connect is an innovative platform that allows employees of the Volkswagen Group to connect between each other, get informed about the Group's latest trends and news, share articles and posts, create and join groups of interests, follow people and gain visibility.

(map that explains Group Connect)

The idea was born in 2013 in the IT's Social Media & Change Management department and first launched in January 2014 when Dr. Martin Hoffmann, head of the Group IT, bought over 500.000 licences from Jive Software.

Jive is a provider of communication and collaboration solutions for business, which enables employees, partners and customers to work together. It brings the tools people love from Facebook and Twitter inside of corporations.

There's a great deal of benefit to socia media. It's quick, and a powerful tool for connecting, sharing, and even seeking information.

Jive, which recently had a successful IPO seeks to bring that power within the enterprise, bringing things like profiles activity

streams, status updates, and sharing to employees. The software lets employees use a platform and method of sharing information they're very used to in a way that enhances productivity and makes it easier to find the people and expertise they need on the job.

Recoded and customised to suit Volkswagen's style guidelines, Group Connect can now boast of being one of the company's most innovative applications with a huge social potential

At the moment Group Connect is accessible only by the IT, the Logistic department and by some other small pilot users belonging to the whole Volkswagen's Group (which means the IT and Logistic department of each brand spread in different countries), but by 2015 also the Finance department will join the list.

#### **Numbers** and Data

As born and first tested in the It department, the concept has beer positively welcomed thanks to its big potential and social media factor missing in every other portal.

Nevertheless, the latest activity statistics of December 2014 prove that the amount of registered users is quite low, counting a total of 5.574 log-ins out of 20.306 possible ones. Moreover only 2.425 of them is actively using it whereas the rest of them logged in the first time and then never used it again.

On the other hand, the possibility to seach for collegues and connect, to post and discuss topics of interest and to find interesting articles and news, seems to be highly appreciated.

475 communities were enstablished 1.416 discussions started and 5.475 answered, 69,224 contacts approved and 21.313 articles liked.

Considered to the 55.000 employees who work in Volkswagen, 5.574 users is not that much of a result, but this depends also on the fact that not everyone has access to the service yet.

Infact, Group Connect is only active ir the Logistic and the IT department.

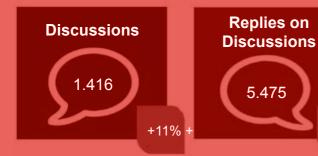
# **ACTIVITY RECORD**

# CALENDAR WEEK 51/2014

10%











# **ACTIVITY RECORD**

	All					1IT Community				Logistic	c Ca	Other departments	
	Potential	Reg	istered	Active users		Registered		Active users		Registered Active users		ve users	Active users
Companies	users	u	sers	last 30 days		users	last 3	last 30 days		users	last 30 days		last 30 days
Audi Volkswagen Korea	7	3	42,86%	3	100,00%	3	3	100,00%					
MAN Diesel &Turbo	113	3	2,65%	3	100,00%	2	2	100,00%		1	1	100,00%	
Audi VW Middleeast	6	2	33,33%	2	100,00%	2	2	100,00%					
Audi Australia	1	1	100,00%	1	100,00%	1	1	100,00%					
Audi Singpore	2	1	50,00%	1	100,00%	1	1	100,00%					0
VW Group Malaysia	8	1	12,50%	1	100,00%	1	1	100,00%					0
MAN Truck & Bus AG	819	45	5,49%	40	88,89%	38	36	94,74%		6	3	50,00%	1
Italdesign	12	6	50,00%	4	66,67%	6	4	66,67%					
VW Group Ireland	3	3	100,00%	2	66,67%	2	1	50,00%					1
VW UK	37	13	35,14%	8	61,54%	10	5	50,00%					3
VW AG	5688	2682	47,15%	1625	60,59%	2009	1224	60,93%		532	274	51,50%	141
VW Group Australia	7	5	71,43%	3	60,00%	3	1	33,33%					2
VW Group France	15	5	33,33%	3	60,00%	4	2	50,00%					1
VW Navarra	141	46	32,62%	25	54,35%	17	7	41,18%		17	6	35,29%	12
VW Sachsen	473	71	15,01%	37	52,11%	26	19	73,08%		39	12	30,77%	6
Autovision	464	350	75,43%	182	52,00%	344	177	51,45%		1	1	100,00%	5
VAESA	18	10	55,56%	5	50,00%	9	4	44,44%					1
VW Motor Polska	72	6	8,33%	3	50,00%	C	0			6	3	50,00%	
VW Original Teile Logistik	10	4	40,00%	2	50,00%	3	1	33,33%					1
Audi China	4	2	50,00%	1	50,00%	2	1	50,00%					
VW Group Sales India	11	2	18,18%	1	50,00%	1	0	0,00%					1
VW Credit USA	70	2	2,86%	1	50,00%	2	1	50,00%					
PH Salzburg	20	11	55,00%	5	45,45%	11	5	45,45%					
VW Group Japan	17	9	52,94%	4	44,44%	8	3	37,50%					1
VW Schweden	39	6	15,38%	2	33,33%	4	0	0,00%					2
VW Pune	184	63	34,24%	20	31,75%	43	13	30,23%	Г	15	2	13,33%	5
Sitech	38	10	26,32%	3	30,00%	8	3	37,50%		2	0	0,00%	
VW Argentinien	65	14	21,54%	4	28,57%	13	3	23,08%					1
Bentley	302	21	6,95%	6	28,57%	5	4	80,00%		16	2	12,50%	
Autoeuropa	135	56	41,48%	15	26,79%	9	2	22,22%		42	8	19,05%	5

# **CALENDAR WEEK 51/2014**

										П	Other			
			All				1IT Community			Logistic Campus				departments
O	Potential		istered	Active users			Registered		Active users		Registered Active users users last 30 days			Active users
Companies Audi Brüssel	users		sers 8.93%	last 30 days 4 26,67%			users 7	0 last 3	0 0.00%		users las		-	last 30 days
VW Nutzfahrzeuge	168 711	15 168	23.63%	44		ŀ	38	9	23.68%	12		,	-	9
			.,		26,19%		236	52	.,	12	1 20	21,49%	-	12
FSAG Gruppe	816	248	30,39%	64	25,81%	ŀ			22,03%		+		-	
VW Italien	45	31	68,89%	8	25,81%		28	5	17,86%			0.000/	-	3
Sitech Polska	64	4	6,25%	1	25,00%		0	0			3 0	.,	-	1
VW Slovakia	502	42	8,37%	10	23,81%		14	5	35,71%	2	-	,	-	2
VW Osnabrück	92	34	36,96%	8	23,53%		18	4	22,22%	1	_	7,69%	-	3
Porsche AG	625	196	31,36%	46	23,47%		164	37	22,56%	3		23,33%	-	2
Audi AG	2912	609	20,91%	136	22,33%		387	97	25,06%	21	+	.,		5
VW Brasilien	245	37	15,10%	8	21,62%		35	6	17,14%		1 1	100,00%		1
Audi Ungarn	372	45	12,10%	9	20,00%		34	7	20,59%	1	-	10,00%		1
SEAT	473	121	25,58%	22	18,18%		94	17	18,09%	2	6 4	15,38%		1
Volkswagen Group of America	110	43	39,09%	7	16,28%		41	5	12,20%					2
Skoda	2823	168	5,95%	27	16,07%		132	22	16,67%	3	5 5	13,89%		
VW Poznan	75	27	36,00%	4	14,81%		24	2	8,33%		1 C	0,00%	L	2
VW Chattanooga	48	29	60,42%	4	13,79%		29	4	13,79%					
Autostadt	57	15	26,32%	2	13,33%		15	2	13,33%					
VW Group Rus	483	51	10,56%	6	11,76%		4	1	25,00%	4	4 2	4,55%		3
VW Southafrica	159	26	16,35%	1	3,85%		12	1	8,33%	1	4 C	0,00%		
VW Mexiko	515	202	39,22%	2	0,99%		165	0	0,00%	3	7 2	5,41%		
Lamborghini	62	6	9,68%	0	0,00%		6	0	0,00%				Ī	
VW Group Singapore	2	1	50,00%	0	0,00%	ı	1	0	0,00%				Ī	
Audi Taiwan	3	1	33,33%	0	0,00%	ı	1	0	0,00%				Ī	
VW Group Polska	4	1	25,00%	0	0,00%	ı	1	0	0,00%				Ī	
Bugatti	16	1	6,25%	0	0,00%	ı	0	0			1 C	0,00%	ı	
Financial Services Brasilien	128	0	0,00%	0		ı	0	0					İ	
MAN Group	3	0	0,00%	0		ı	0	0						
MAN Trucks Russia	11	0	0,00%	0		ľ	0	0					ı	
VW Transmisson Dalian	1	0	0,00%	0		l	0	0					ı	
Summe	20306	5574	27,45%	2425	43,51%		4073	1802	44,24%	126	4 401	31,72%		237

# RESEARCH, ANALYSIS & REDISIGN OF GROUP CONNECT

# **VOLKSWAGEN'S SOCIAL ENTERPRISE PLATFORM**

# 4.1 Discover and Define

- 4.1.1 What is Group Connect
- **4**.1.2 Brief
- 4.1.3 Methodologies
- 4.1.4 Research and Analysis

# **4.2** Interpret and Synthetize

- 4.2.1 Main problems and findings
- **4.2.2** Brief's evolution: Redesigning the User Experience

# 4.3 Ideate and Develop

- 4.3.1 Co-Design tools
- 4.3.2 Co-Design Workshop
- 4.3.3 Results New Opportunities

# **4.4** Implement and deliver

4.4.1 Redesigning the function, communication and value

# **DISCOVER & DEFINE**

**INTERPRET & SYNTHETISE** 

DEATE & DEVELOP

IMPLEMENT & DELIVER

4

- **1.1** Initial Brief
- 1.2 UX Design
- **1.3** Research & Analysis

- **2.1** insights
- **2.2** Brief's evolution

- **3.1** Co-Design tools
- **3.2** Co-Design Workshop
- **3.3** Results

- **4.1** Insights
- **4.2** New Concept

# THE PROCESS



The research, analysis development process of the internal online platform Group Connect was approached in four steps in which I solved not only the Brief's problem, but also other unexpected issues that are the real reason behind the low usage of the platform.

#### PHASE 1

Research, analysis & solution of GC's usability (UI,UX)

#### PHASE 2

Research, analysis & definition of additional problems

#### PHASE 3

Design Thinking & Ideas generation Workshop to solve the three problems

#### PHASE 4

Concept development to solve the main issue

**1.1** Initial Brief

# **INITIAL BRIEF**

The Social Media & Change Management department asked the UX center of Excellence to use the User Experience design methodologies to make a research and analysis of the user behaviour towards Group Connect, with focus on the navigation, the layout and the Homepage strucure.

The goal was to redesign the UI and eventually to understand the reason behind the limited usage of the company's connecting portal.

**1.1** Initial Brief

1.2 UX Design

# WHAT IS UX DESIGN?

User experience (abbreviated as UX) is how a person feels when interfacing with a system. The system could be a website, a web application or desktop software and, in modern contexts, is generally denoted by some form of human-computer interaction (HCI).

Those who work on UX (called UX designers) study and evaluate how users feel about a system, looking at such things as ease of use, perception of the value of the system, utility, efficiency in performing tasks and so forth.

UX designers also look at subsystems and processes within a system. For example, they might study the checkout process of an e-commerce website to see whether users find the process of buying products from the website easy and pleasant. They could delve deeper by studying components of the sub-system, such as seeing how efficient and pleasant is the experience of users filling out input fields in a Web form. Compared to many other disciplines, particularly Web-based systems, UX is relatively new. The term "user experience"

was coined by Dr. Donald Norman, a cognitive science researcher who was also the first to describe the importance of user-centered design (the notion that design decisions should be based on the needs and wants of users).

## **WHY IS IT IMPORTANT?**

Nowadays, with so much emphasis on user-centered design, describing and justifying the importance of designing and enhancing the user experience seems almost unnecessary. We could simply say, "It's important because it deals with our users' needs — enough said," and everyone would probably be satisfied with that. However, those of us who worked in the Web design industry prior to the codification of user-centered design, usability and Web accessibility would know that we used to make websites differently. Before our clients (and we) understood the value of usercentered design, we made design decisions based on just two things: what we thought was awesome and what the client wanted to see. We built interaction based on

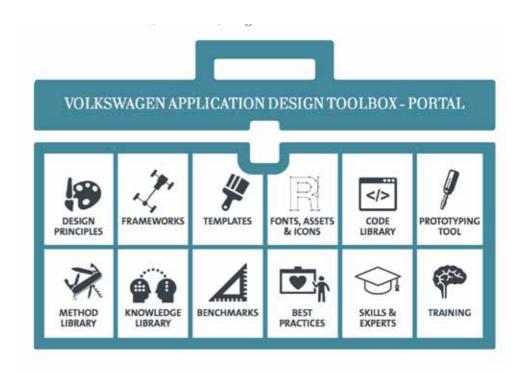
what we thought worked — we designed for ourselves. The focus was on aesthetics and the brand. with little to no thought of how the people who would use the website would feel about it. There was no science behind what we did. We did it because the results looked good, because they were creative (so we thought) and because that was what our clients wanted. But this decade has witnessed a transformation of the Web. Not only has it become more ubiquitous — the Web had at least 1.5 billion users globally in 2008 but websites have become so complex and feature-rich that, to be effective, they must have great user experience designs. Additionally, users have been accessing websites in an increasing number of ways: mobile devices, a vast landscape of browsers, different types of Internet connections. We've also become aware of the importance of accessibility — i.e. universal access to our Web-based products — not only for those who with special requirements, such as for screen readers and non-traditional input devices, but for those who don't have broadband connections or who have older mobile devices and so forth. With all of these sweeping changes, the websites that have consistently stood out were the ones that were pleasant to use. The driving factor of how we build websites today has become the experience we want to give the people who will use the websites.

# USER CENTER OF EXCELLENCE

The User Experience design department is part of the IT, Information Technology department of Volkswagen AG. The role of the UX team is to describe all aspects of the experience of a user when interacting with a product, service, an environment or a device. This includes software and IT systems.

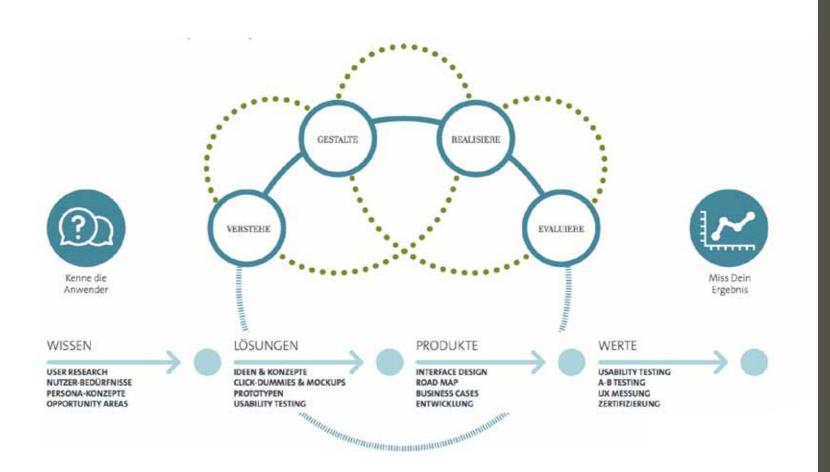
It provides a set of standardized tools for interface creation, methods for measuring the usability of applications, a pre-production prototype and a laboratory for a consultation process for the user centralisation.

The department is formed by an interdisciplinary team of computer scientists, researchers and designers with the task of redisign Volkswagen applications, services, systems and processes in a user-friendly way, to create the necessary framework and to anchor user-centered methods in the IT.



"We need to go through the effort of developing our own understanding of users and their needs, not simply hope that a group of people understands themselves and can convey their understanding to us."

- Steve Baty



## **USABILITY**

# Best practice for UX design

Things we take for granted don't always happen by chance, they happen by design. Well designed buildings affect peoples' lives and well designed websites have an impact on sales. Good design isn't only about good looks than it is about making things usable and useful. Usability goes beyond sales, it determines how we use products or interfaces and interact with them. Whatever the objectives are, users won't stay on a website or application for long without good content and usability in place.

Usability is normally looked at after specific users, their goals and their context have been identified. There is no general rule that can be applied to all users and all tasks. Every company has their own objectives, certain technical capabilities and unique audiences. Nonetheless there are starting points from which initial assumptions can be created. These have been defined as how easy it is for users to learn to use an

interface, how they can effectively accomplish tasks, and how they remember their experience. These UX design objectives can be implemented on a website using the following seven aspects that provide a great framework for best practice.

#### 1. Navigation

Visual cues should be in place that set priorities and guide a user into the desired direction. A user will likely ask 'where am I?' or 'how can I get where I want to go'. Knowing what users expect and organizing the content accordingly is key to good information architecture and UX design.

A fashion retail website for example may be visited by some people for researching trends and by others for buying items. Their aims are vastly different and ideally the site's navigation caters for most user-scenarios. The scenario of the highest business relevance (the buyers in this case) have the highest priority for arranging content. Insight into user behaviour is essential for successful e-commerce and is obtained through usertesting. This brilliant website is one way to test contents even when you only have a low budget.

#### 2. Familiarity

Users' expectations are met when language and visuals are understood and create a sense of trust. People tend to trust what is familiar to them and trust is essential for selling products online, following rather than breaking conventions enhances the sense of familiarity. Following common conventions for the web needs to be combined with creating a point of difference for the brand. That's exactly where the challenge for information architects and designers lies. Familiarity is also depending on behaviour. How often for example do certain people shop online or how much do they know about payment processes and security. Viewing habits for audiences differ across demographics and industries, there are however elements and conventions that are similar throughout the web. These conventions are known to experienced UX designers or can be elaborated through user-testing. Users can be tested via video and screen capture using this software.

#### 3. Consistency

To create a cohesive experience with the brand the tone of voice and visual language is used consistently across channels. Design follows a brand's desired associations and principles. Ideally a site's performance is predictable, and yet the user experience should bare an element of surprise.

How can this be done? A great example is asos.com where every product is featured with a large product preview panel as well as videos of the product in use. While pictures of the product are expected and taken for granted by users, the video preview dramatically enhances the shopping experience on the site and sets asos.com apart from most competitors.

#### 4. Error prevention

Visual cues and a clear layout should help preventing errors. Yet when a user mistakenly clicks somewhere wrong or forgets something, it should be easy to recognize, diagnose and recover from an error. Help should be within reach. A simple description panel or self-explanatory icons can indicate a way for correction.

For audiences with disabilities, textsize, red/greens and color contrasts are important. This website can be used to test the colors. Also live texts instead of images or Flash elements are enhancing chances of a website to be read correctly by Google and screen readers for blind people.

#### 5. Feedback

A timely manner of response with a user's interaction vastly enhances a site's usability. Image galleries for example don't need to reload a web page for every click or secondary content can be hidden and expanded upon roll over.

Saving a user's time is not the only objective for giving valuable feedback. User's need to be assured that actions they have taken are clear and can be undone. This can be achieved through establishing intuitive visual cues that highlight relevant areas of focus.

#### 6. Visual clarity

Arranging content as a means to support optimal consumption can be achieved by following conventions for layouts and site structures that users expect. Also, information is ideally presented in a natural and logical way. User scenarios guide a way for a most likely journey within a site. Visual clarity also lowers barriers to commit to a long-term engagement because it communicates an ease of use and a quick start with no need to prior learning. It creates a sense of attainability for what users may aspire. It makes complex technology simple enough for anyone to use. Clarity and accessibility can be regarded as a supporting value for the brand. Data visualization, for example, can provide visual clarity through making complex data quickly understandable.

#### 7. Flexibility

Visuals can create a lasting memory and rewarding experience. Similar to a visit of a brick and mortar store, an atmosphere created with colors and imagery can make or break an experience. And yet the design should be flexible enough to give a feeling of individuality, i.e. through personalization. In particular this means that data visualization can hint at areas of achievement, i.e. a line that goes from orange towards green, visualizing progress.

Imagery at the end of a user's journey should create an optimistic atmosphere through imagery and use of relevant colours. A good feeling at the end of a journey stimulates return visits, increasing the efficiency of the outcome for users.

"

What makes people passionate, pure and simple, is great experiences. If they have great experience with your product and they have great experiences with your service, they're going to be passionate about your brand, they're going to be committed to it. That's how you build that kind of commitment.

- **1.1** Initial Brief
- **1.2** UX Design
- **1.3** Research & Analysis

# RESEARCH & ANALYSIS

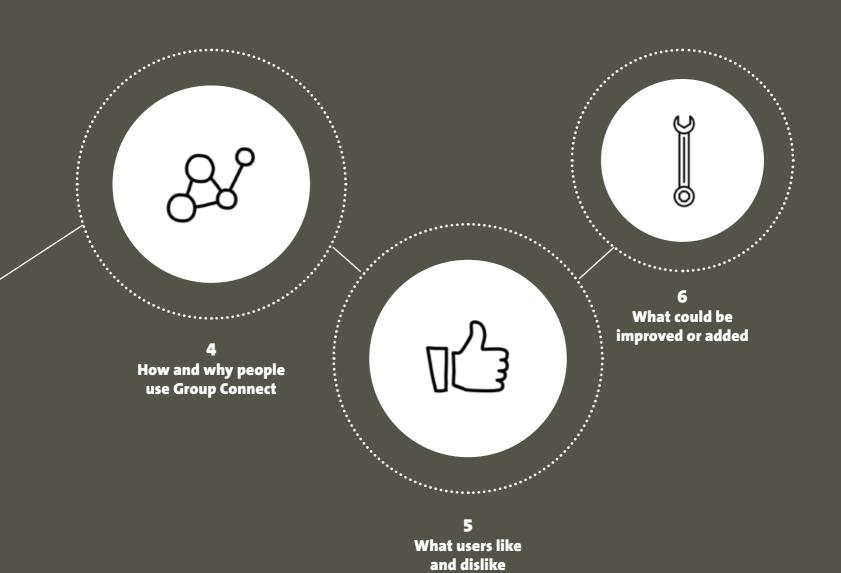
# From the tools to the findings

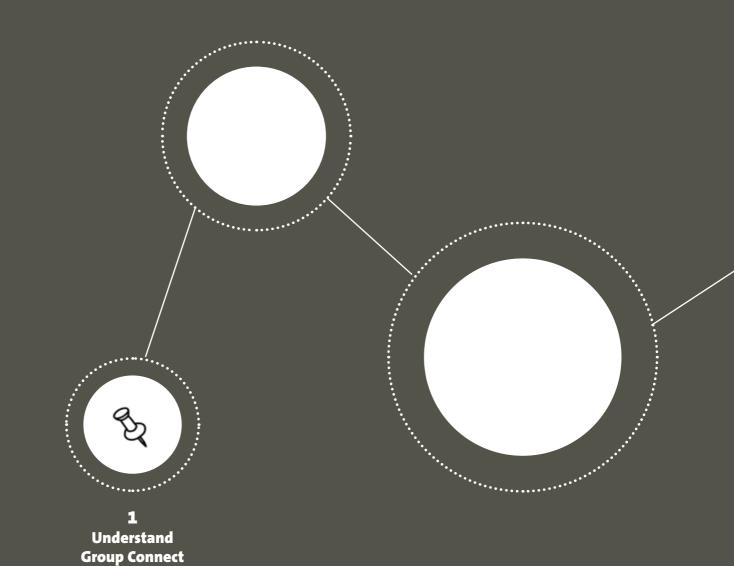
The long and complex research process has taken two months in which I first did a general research to deeply understand the service Group Connect. In the next steps I discovered who the different types of users are, how and why they use Group Connect, what they like and dislike about it and what they wish to be improved or added.

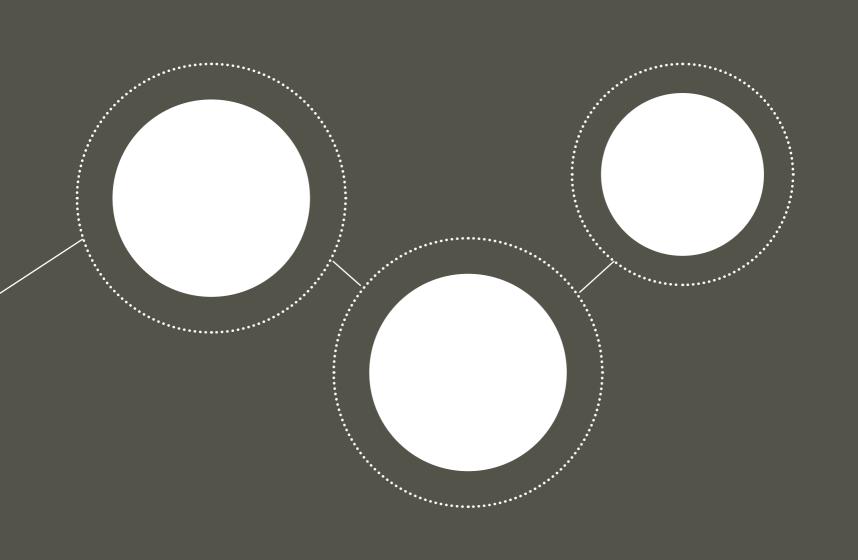
In this first phase of research I focused on the usability in order to accomplish the Brief's task of redesigning the User Interface.

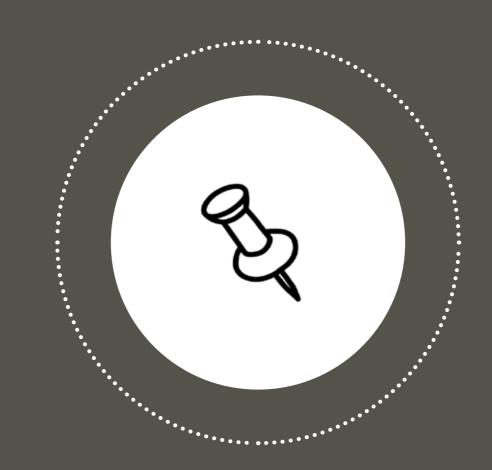
- 1. Understand Group Connect
- 2. Find the right interviewees
- 3. Who are the users
- 4. How do people use Group Connect
- 5. What they like and dislike
- 6. What could be improved or added in their opinion



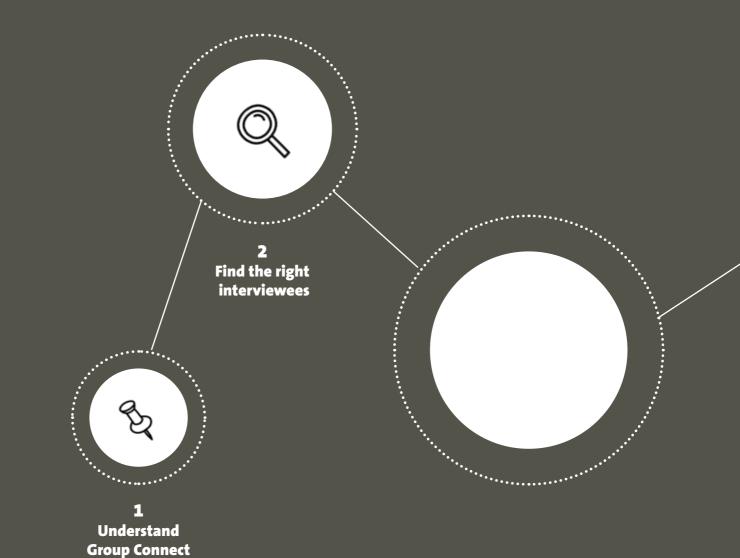


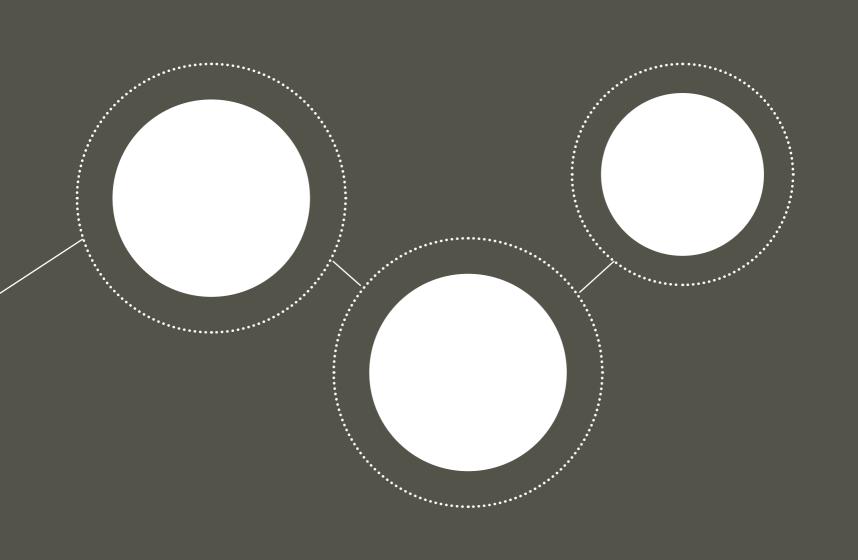






**Group Connect is an innovative** platform that allows employees of the Volkswagen Group to connect between each other, get informed about the Group's latest trends and news, share articles and posts, create and join groups of interests, follow people and gain visibility.







## Find the right interviewees

In order to find the right interviewees I searched for people with different professional, ethnographical and cultural background, age and experience. They also had to belong to different departments of the Volkswagen Group or even belong to external companies working with Volkswagen.



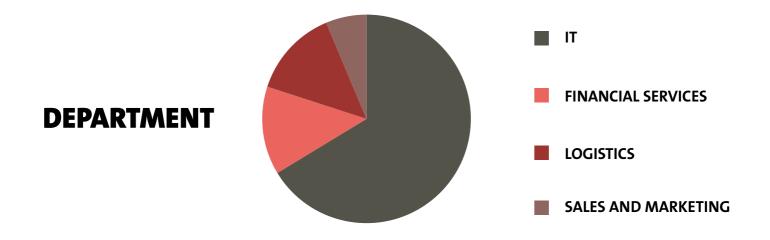


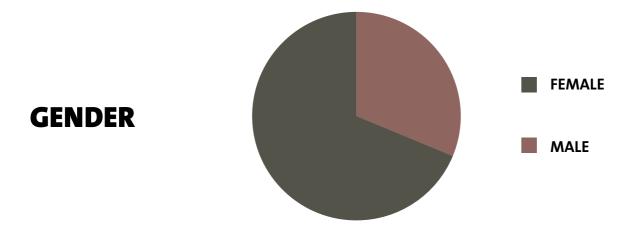


**16 INTERVIEWEES** 

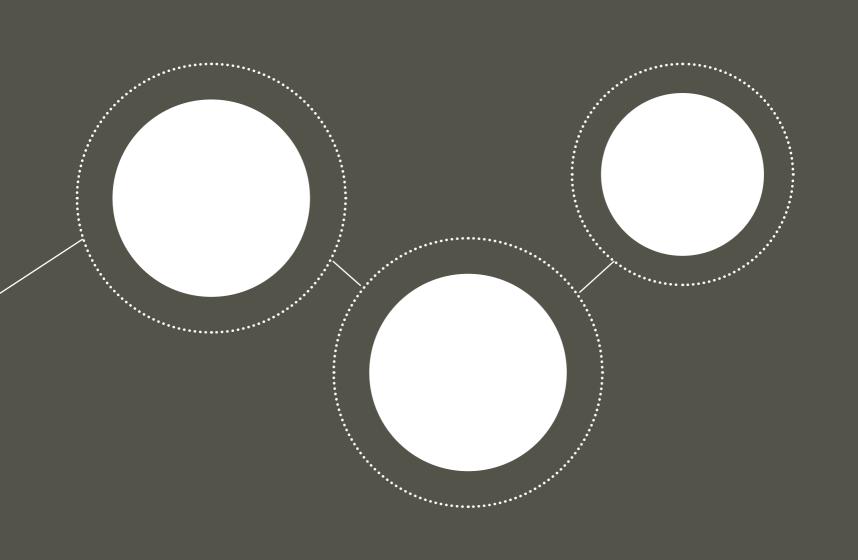


**ORIGIN** 











## Who are the users of Group Connect?

In order to understand excactly who the users of Group Connect really are, I asked them their department, position, how often they use Group Connect and how often they use social media in general. Moreover I was interested in how they perceived the service in terms of message, value and communication. In orther to gather the information we used a survey which they had to fill out.



## GROUP CONNECT

# **USER EXPERIENCE RESEARCH**

## INTERVIEW-LEITFADEN

NOVEMBER 2014

TP:	
INTERVIEWER: _	
DATUM:	

TEILNEHMER INFO

Frequency of use: Low / Middle / Active

Ways of Using: Passive / Active / Contributor

Use of social media: Low / Middle / High

## 1. SCREENING QUESTIONNAIRE

Job Role:
Name

Department:

Where do you come from:

# HOW OFTEN DO YOU USE THE PLATFORM GROUP CONNECT?

I have never used it

I use it regularly

I logged in few times

It is part of my workday

- I use it sometimes
- WHAT IS THE MAIN PURPOSE OF GROUP CONNECT FOR YOU PERSONALLY? 5

# PLEASE MARK ALL THE ACTIVITIES THAT YOU DO IN GC.

Reading articles

Find people

Comment

Connect with people

Join discussions

Ask questions

Write your own articles

Share articles

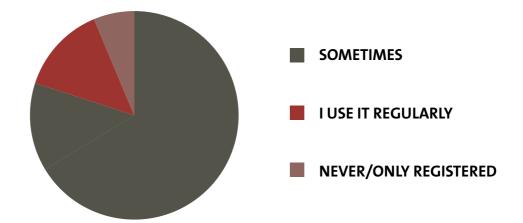
Follow people

Share files

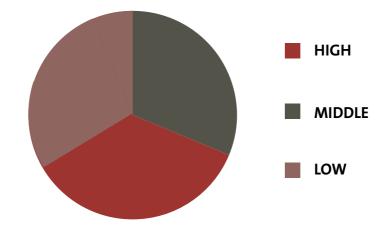
- Follow groups

'n.	5. WHICH OF THEM DO YOU ACTIVELY USE ON A REGULAR BASIS (i.e. posting, liking etd)?	REGULAR BASIS (i.e. posting, liking etd)?
•	Facebook	Tumblr
•	Twitter	Instagram
•	Google Plus	You Tube
•	LinkedIn	Other:
•	Pinterest	
9	WHICH OF THEM DO YOU HAVE AS AN APP ON YOUR SMARTPHONE?	YOUR SMARTPHONE?
	<ul> <li>Facebook</li> </ul>	Tumblr
	• Twitter	Instagram
	Google Plus	You Tube
	LinkedIn	• Other:
	Pinterest	

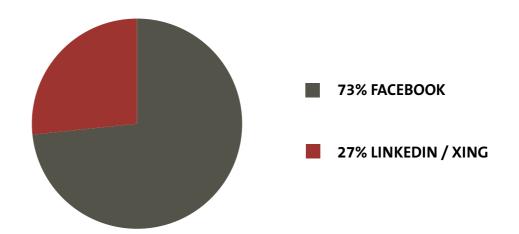




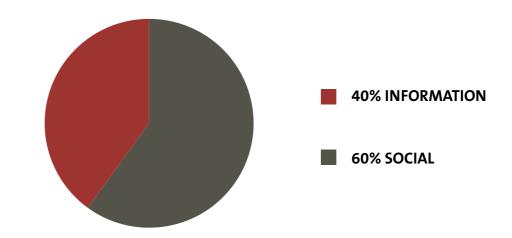
### USE OF SOCIAL MEDIA



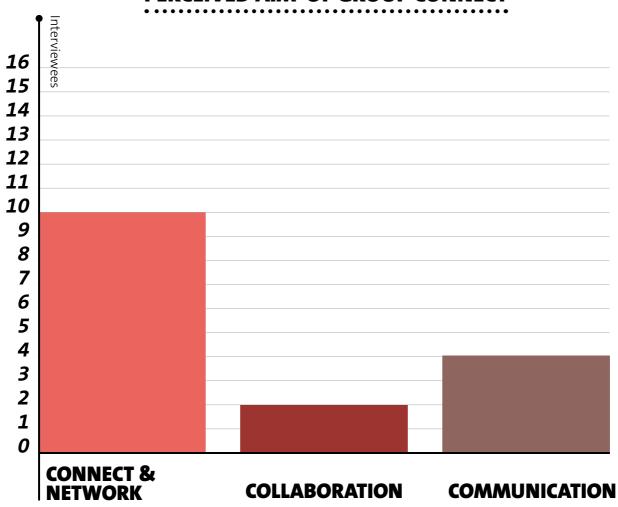
SIMILARITY
BETWEEN
GROUP
CONNECT &
OTHER SOCIAL
NETWORKS







#### PERCEIVED AIM OF GROUP CONNECT

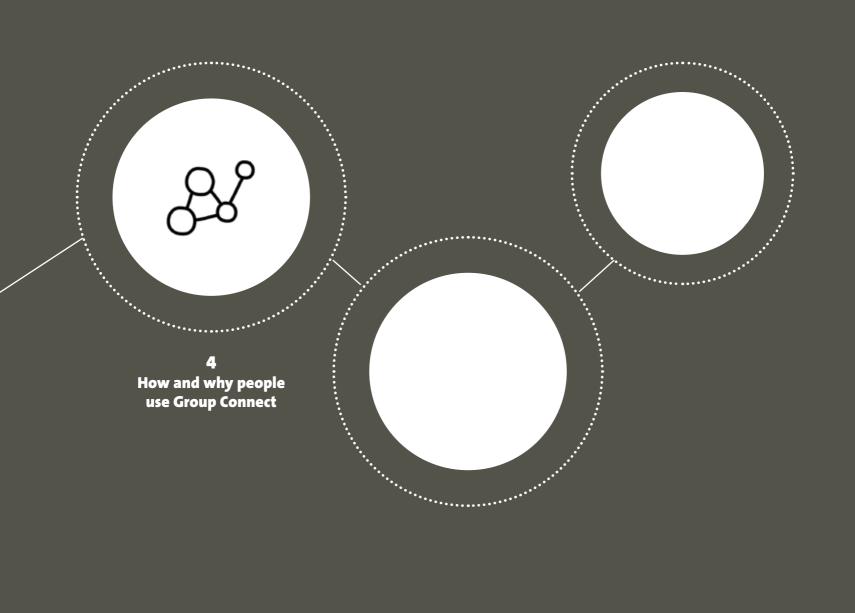


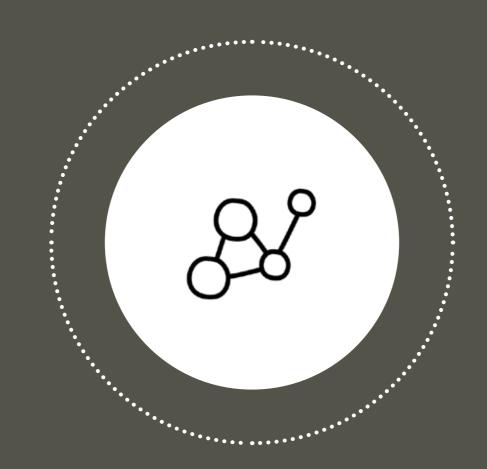
## NETWORK COMMUNICATION

CORPORATE /
BUSINESS /
COLLABORATION /

**CONNECT / SOCIAL / INTERNAL FACEBOOK** 







## How & why people use Group Connect?

In this part of the interview I went deeper with the questions and investigated on how exactly users use Group Connectinterms of navigation and functionalities.

## 2. EINLEITUNG

möchten erfahren, wie das System genutzt wird und wie die Erfahrungen sind. Durch die Interviews In den nächsten 90 Minuten werden wir uns mit dem IT-System Group Connect beschäftigen. Wir wollen wir herausfinden, wo es mögliche Usability-Probleme gibt und wie wir diese verbessern

persönlichen Meinung interessiert bin. Daher würde ich Sie bitten, mir alles zu sagen, was Ihnen in In diesem Zusammenhang möchte ich Ihnen ein paar Fragen stellen, wobei ich sehr an Ihrer Bezug auf das System durch den Kopf geht: Positives, Negatives oder worüber Sie sich z. B. Dabei werde ich Ihnen auch Aufgaben stellen. Hiermit möchten wir nicht Sie testen, sondern sehen Inwiefern das System verständlich ist und was etwaige Schwachstellen sind. Sie können dabei also nichts "falsch" machen. Sagen Sie einfach, wenn Sie an irgendeiner Stelle Probleme haben oder etwas unklar ist.

einsetzen, der Ihr Klickverhalten und Ihre Augenbewegung aufzeichnet. Außerdem würde ich gerne Auswertungszwecken verwendet und nicht außerhalb von Volkswagen, die Auswertung erfolgt (Formular Einverständniserklärung unterschreiben lassen) Alle Aufzeichnungen werden nur zu Ihr Interview per Audiorecorder aufzeichnen, um die Interviews besser auswerten zu können. Für die Auswertung dieser Untersuchung möchte ich gerne einen sogenannten Eye-Tracker anonymisiert, alle Aufzeichnungen werden nach der Auswertung gelöscht.

Untersuchung dient lediglich zur Verbesserung des Group Connect Interfaces und nicht dazu, ihre In dieser Analyse werden wir ihr Verhalten im Umgang mit Group Connect beobachten. Diese persönlichen Fähigkeiten im Umgang mit der Software zu evaluieren.

Papier Prototypen und zwei Aufgaben innerhalb der Software, für die "Eye-tracking" Technologie Unsere Forschung besteht aus einer offenen Diskussion über Group Connect, der Analyse von eingesetzt wird. Hierbei werden ihre Augen und Mouse Bewegungen analysiert. Zum Ablauf: Zunächst werde ich Ihnen einige allgemeine Fragen zu Ihrer Person und Ihrer Nutzung des Systems stellen. Danach schauen wir uns das System gemeinsam an.

## 3. ANFANGSFRAGEBOGEN

Connect?
Group
Sie
kennen
Woher
H

War es einfach den Umgang mit Group Connect zu erlernen? сi

3. Wie off benutzen Sie Group Connect?

4. Warum benutzen Sie es und wofür?

5. Was ist für sie wichtig in GC?

6. Welche Info sind für Sie am Wichstingsten?

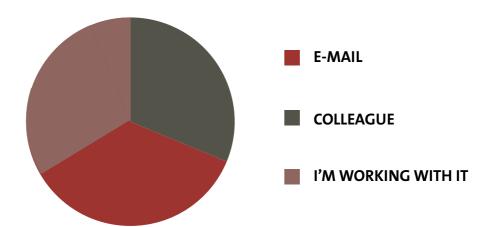
Denken Sie "dass Group Connect Ihnen dabei helfen könnte leistungsfähiger zu sein? œί

(Ja - Wie? Nein - Warum nicht?)

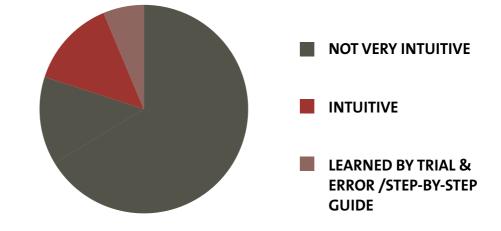
9. Mit welchem öffentlichen Social Network würden Sie Group Connect vergleichen?

10. Beschreiben Sie Group Connect in zwei Worten

HOW DID YOU FIND OUT ABOUT GROUP CONNECT?



DIFFICULTY
IN LEARNING
HOW TO USE IT



### **BEGINNERS**

Connect
Find information
Share information

### **USER TYPE APPROACH**

Stay updated Find specialist Communicate

**EXPERIENCED USERS** 

#### **Easier & Faster to find information**

Easier & Faster to find the right people

**Improves Communication** 

**Makes me more Efficient** 

Flattens hierarchy

**Better Interface and Usability** 

If more colleagues would use it

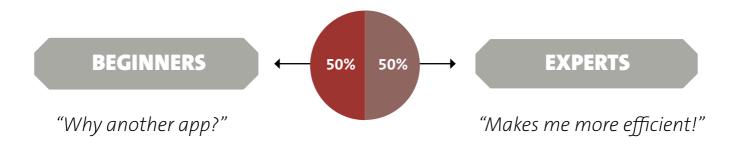
If it would be combined with Outlook

If management would use it more

More relevant content

**Better structure** 

#### THE VALUE OF GROUP CONNECT FOR WORK



Discouraged by the high number of similar Volkswagen applications which offer some of the same functionalities

Want GC to be combined with other applications

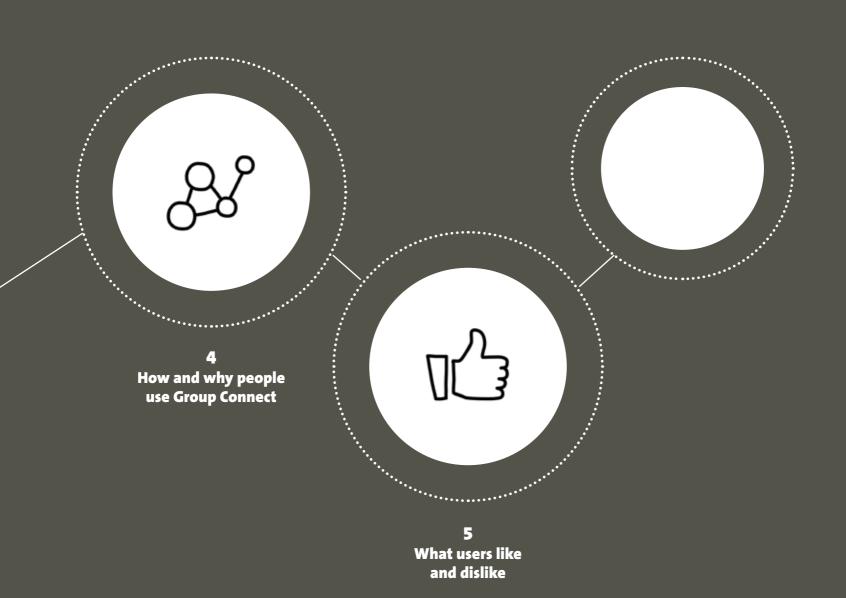
See it as distracting, as time lossand even judge those who use it Experienced users understand GC's value over the time and start using it more than other Volkswagen applications

GC has a unique function and space in everyday work life

GC facilitates and encourages the collaboration

THERE IS A **URGENT NEED** FOR IMPROVED COMMUNICATION OF THE UNIQUE **VALUE PROPOSITION** 







## What users like and dislike

In this part of the interview I did some user led observations and think aloud.

I observed the user while he navigated the site and took note of their comments.

Moreover, through the help of specific technologies I was able to find out which their preferences are and what they use more or don't use and for which reason.

This part of the research is fundamental in order to redesign the UI, user interface.



### Einverständniserklärung für Eye Tracking & Audioaufzeichnung im Rahmen der Nutzerinterviews für Group Connect

Hiermit erkläre ich mich einverstanden mit der Eye Tracking und Audio Aufzeichnung meines Interviews während der Anwendergespräche für die Neukonzeption des Systems Group Connect.

Die aufgezeichneten Inhalte werden nach anonymisierter Auswertung gelöscht.

CONSENT FORM

Einverständniserklärung für Eye Tracking & Audioaufzeichnung im Rahmen der Nutzerinterviews für Group Connect

# EYE TRACKING SOFTWARE

In the simplest terms, eye tracking is the measurement of eye activity. Where do we look? What do we ignore? When do we blink? How does the pupil react to different stimuli? The concept is basic, but the process and interpretation can be quite complex.

Tobii eye tracking systems enable you to efficiently obtain valid and reliable eye tracking research results, by being easy to use, unobtrusive, and highly accurate and precise. The Tobii Studio eye tracking software provides a comprehensive platform for recording, observation, analysis and visualization in heat maps and gaze plots.



# The Process of EyeTracking

Eye tracking data is collected using either a remote or headmounted 'eye tracker' connected to a computer. While there are many different types of non-intrusive eye trackers, they generally include two common components: a light source and a camera. The light source (usually infrared) is directed toward the eye. The camera tracks the reflection of the light source along with visible ocular features such as the pupil. This data is used to extrapolate the rotation of the eye and ultimately the direction of gaze.

Additional information such as blink frequency and changes in pupil diameter are also detected by the eye tracker. The aggregated data is written to a file that is compatible with eyetracking analysis software such as EyeWorks.

# Interpretation of eye tracking data

There are many different methods of exploring eye data. The most common is to analyze the visual path of one or more participants across an interface such as a computer screen. Each eye data observation is translated into a set of pixel coordinates. From there, the presence or absence of eye data points in different screen areas can be examined. This type of analysis is used to determine which features are seen, when a particular feature captures attention, how quickly the eye moves, what content is overlooked and virtually any other gaze-related question. Graphics such as GazeSpots™ and GazeTraces™ are often generated to visualize such findings.

Beyond the analysis of visual attention, eye data can be examined to measure the cognitive state and workload of a participant. EyeTracking's patented Index of Cognitive Activity (ICA) is among the most widely used of these metrics. It has been validated in multiple

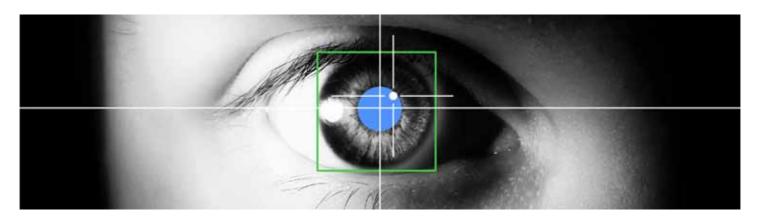
contexts as a reliable indicator of mental effort.

Revolutionary tools such as the ICA have effectively demonstrated the wealth of information attainable through careful study of the eye.

# The applications of eye tracking

Think of all the ways that you will use your eyes today. You might drive a car, read a magazine, surf the internet, search the aisles of a grocery store, play a video game, watch a movie, look at pictures on your mobile device. These are applications of eye tracking. With few exceptions, anything with a visual component can be eye tracked. We use our eyes almost constantly, and understanding how we use them has become an extremely important consideration in research & design.

The automotive, medical and defense industries have applied eye tracking technology to make us safer. The fields of advertising, entertainment, packaging, web design have all benefited significantly from studying the visual behavior of the consumer. Research with special populations has generated exciting breakthroughs in psychology and physiology. Every day, as eye tracking is used in creative new ways, the list of applications grows.

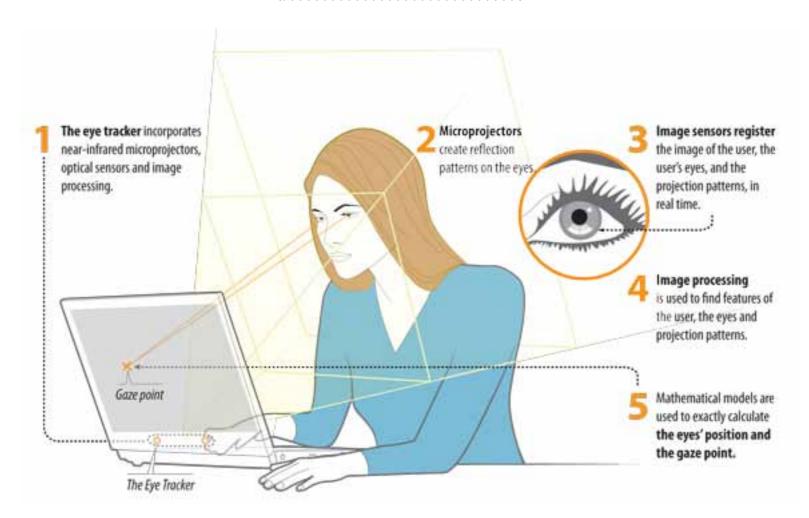


# **Tobii EyeTracking Systems**

# tobii



# **How Eye Tracker works**



### 4. ÜBUNGSAUFGABE & BENUTZER KALIBRATION

A: Nun werden wir die "Eye-tracking" Technologie benutzen.

B: Kalibrierung des Benutzers mit dem "Eye-tracking" Gerät.

# **FOLLOW THE DOT**

## 5. USE CASES

### START EYE TRACKING RECORDING

Zu Beginn, öffnen Sie bitte Ihren Browser, suchen Sie nach Group Connect und loggen Sie in.

USE CASE 1: Öffnen Sie bitte die Startseite --> Finden Sie die letzten Neuigkeiten von Ihrer IT Abteilung/Logistik/Group Connect Plaza.

Vergessen Sie nicht mich jedes Mal zu informieren, sobald Sie mit einer Aufgabe fertig sind.

In der zweiten Aufgabe werde ich Sie beten, nach manchen Gruppen und mehr spezifische Informationen zu suchen. Wie schon gesagt dient diese Untersuchung lediglich zur Verbesserung des Group Connect Interfaces und nicht dazu, Ihre persönlichen Fähigkeiten im Umgang mit der Software zu evaluieren. Vergessen Sie nicht mich jedes Mal zu informieren, sobald Sie mit einer Aufgabe fertig sind.

### **USE CASE 2**

# Gruppe 1

- Suchen und kontaktieren Sie bitte einen Kollegen
- Senden Sie eine Nachricht an Ludovica Vando
- Suchen Sie den Trainingsraum
- Finden Sie die Gruppe UX FOR A BETTER WORLD--> Kommentieren Sie
- Nehmen sie an EVENT FACTORY HOLIDAY Teil

# Gruppe 2

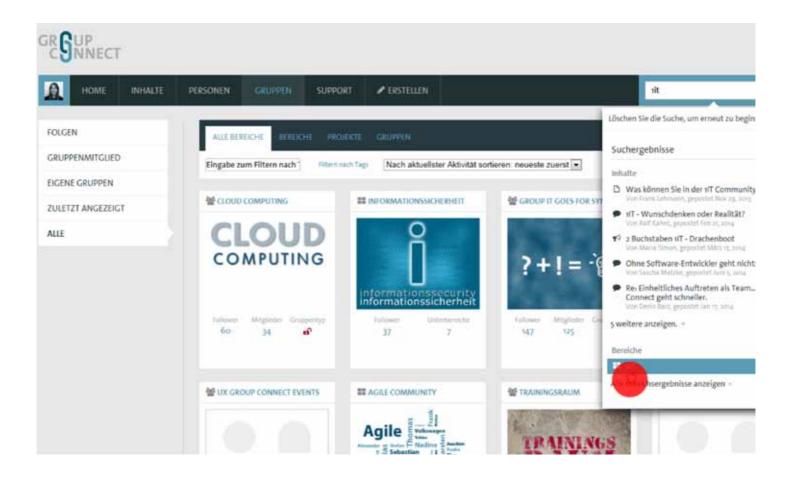
- Finden Sie die JAVA Gruppe -->Wählen Sie einen Artikel aus und teilen Sie es mit Frank Lehmann
- Finden Sie Gruppe UX FOR A BETTER WORLD --> Schreiben Sie einen kurzen Post und teilen Sie es in der Gruppe UX FOR A BETTER WORLD

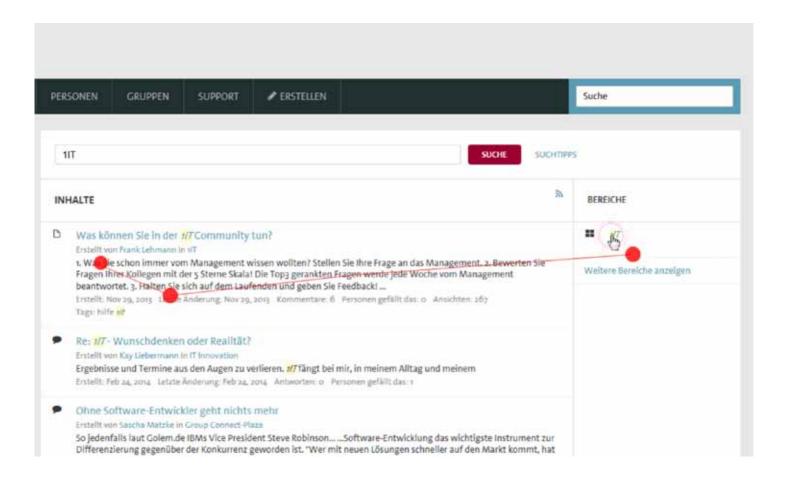
# Gruppe 3

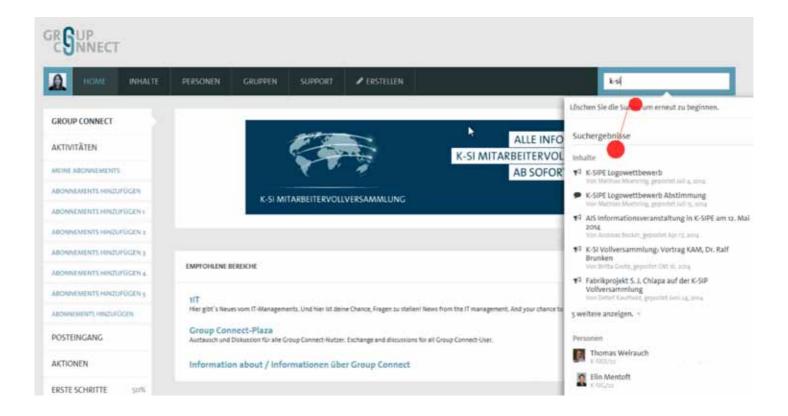
- Finden Sie die IT Newsletter auf Englisch
- Finden Sie alle Group Connect Benutzer die aus Audi Hungarien kommen
- Finden Sie raus wenn das nächste Agile Community Treffen stattfinden wird.
- Finden Sie raus wie viele Untergruppen zur IT Gruppe gehören.

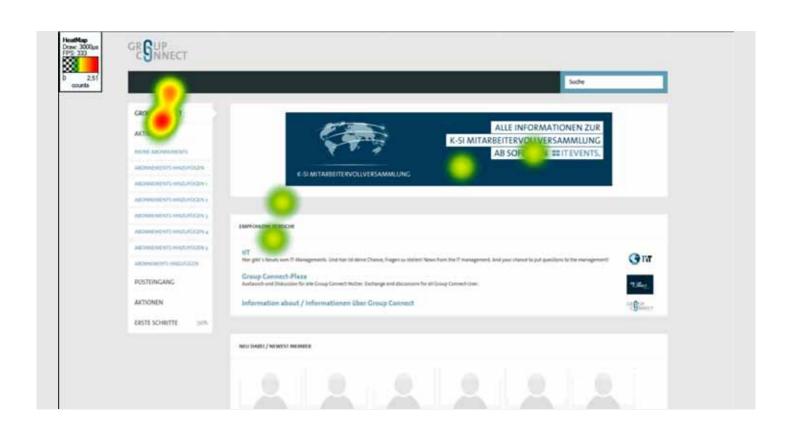
## FINISH EYE TRACKING RECORDING

USE CASE 3: START RETROSPECTIVE THINK ALOUD

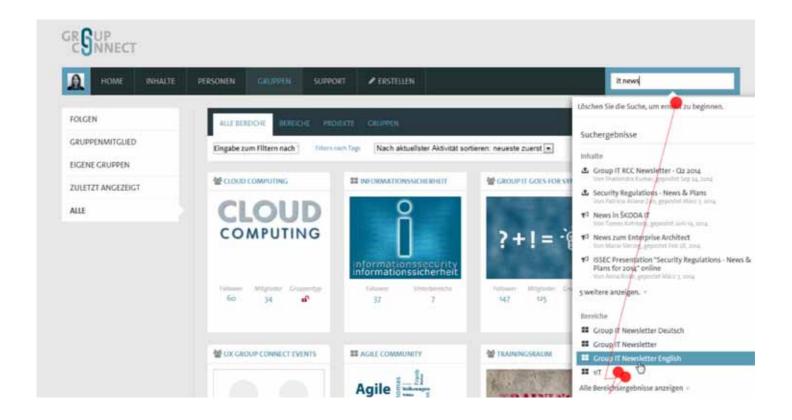








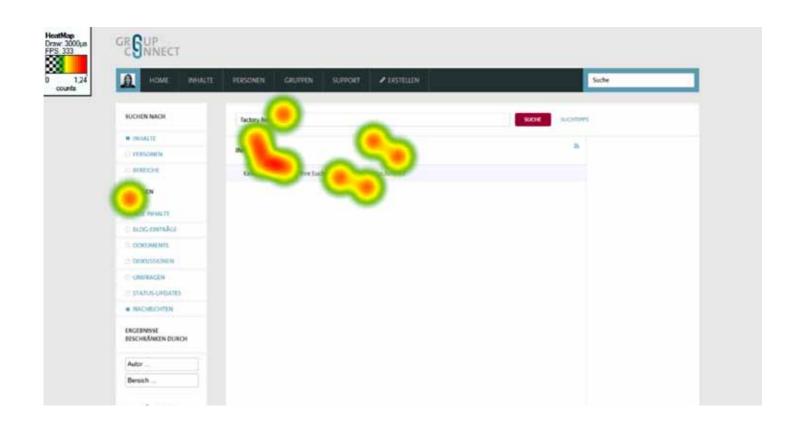
# Q: Find the Newsletter in English



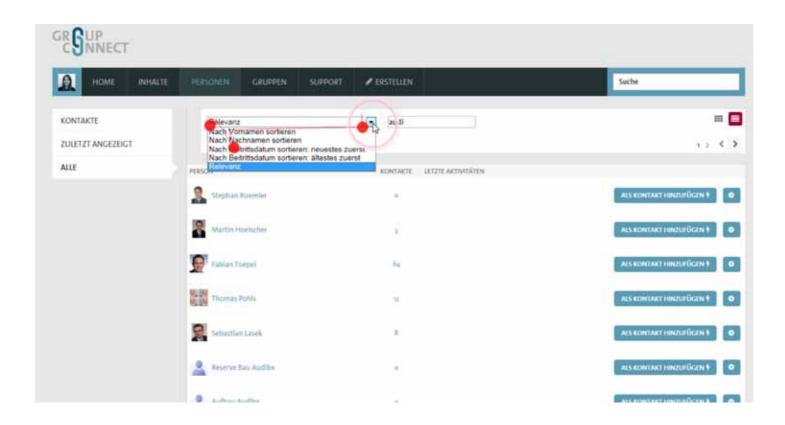
# Q: Find all the sub-groups of 1IT



# Q: Join the event 'Factory Holiday'



# Q: Find all the GC users of Audi Hungary



# Q: Find the group 'UX for a better World'



# Q: Which one is the Home page button?



### 6. USER LED OBSERVATIONS + THINK ALOUD

 Ich selbst kenne das System fast nicht. Daher möchte ich Sie bitten, mir das System schnell zu zeigen und zu erklären.

(G1: If the user is not familiar with GC, ask him how does he THINK IT WORKS.)

### NOW FOCUS ON STARTSEITE AND NAVIGATION MENU

- Ich würde Sie bitten, die Startseite jetzt zu aufzumachen. Das heißt vom Öffnen der Bedienoberfläche an.
  - Was sind Ihre Gedanken dazu?
  - o Denken Sie dass es gut funktioniert? Warum?
  - · Welche Funktionen sind besonders hilfreich? Warum? Bitte zeigen Sie mir diese.
  - Welche Funktionen sind besonders nervig und kompliziert? Warum? Bitte zeigen Sie mir diese.
  - Fehlen Ihnen Funktionen oder Informationen? Welche und warum?
  - Welche Informationen m\u00f6chten Sie als erstes sehen, wenn Sie sich in Group Connect einloggen?

# PEOPLE'S IMPRESSIONS & THOUGHTS ABOUT LAYOUT STRUCTURE NAVIGATION FUNCTIONS

Confusing, not very intuitive

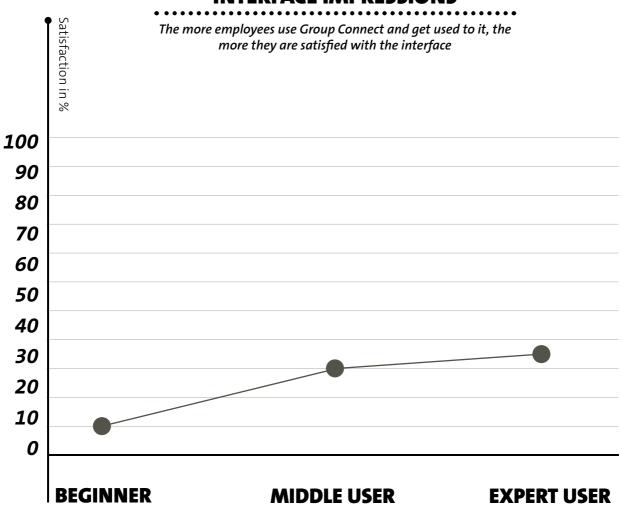
Too much text based

Lack of icon-language

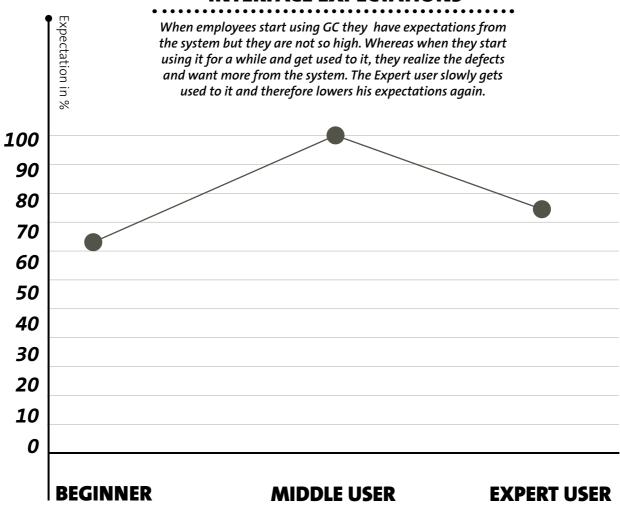
Wasted screen space

**Bad structure** 

# **INTERFACE IMPRESSIONS**



# **INTERFACE EXPECTATIONS**



2. Layout is too text based and text is too small

3. Need for Icon language

4. Keep the same layout on every page

5. Too much waste of space in the layout

2. 75% of users want an Activity Streamline (Timeline) as their Homepage

3. Want the possibility to personalize the Homepage

4. Better & more valuable content should be on the Homepage

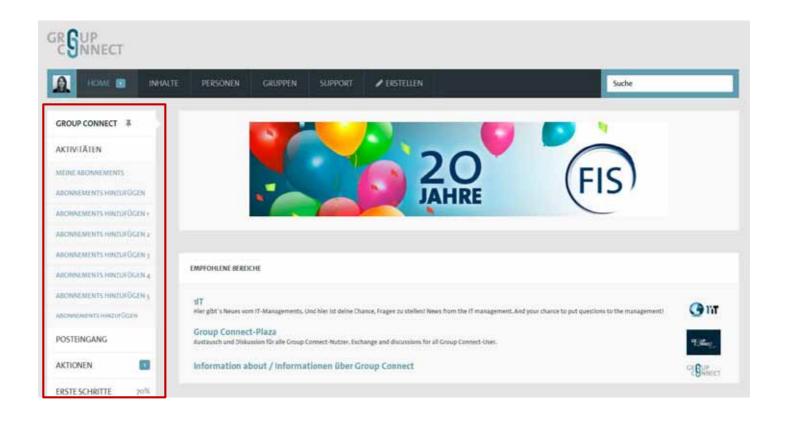
# WHICH ONE IS ACTUALLY THE HOMEPAGE

for many it's still confusing to find the homepage and to understand what they can actually do with it



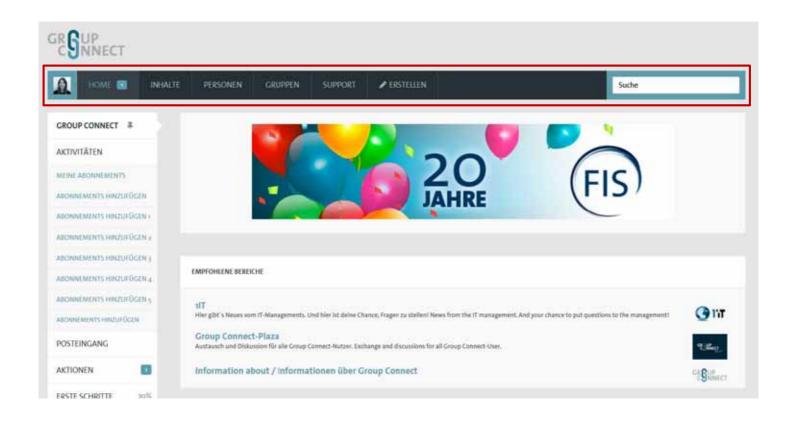
# **LEFT NAVIGATION**

Not much used. Most of all 'My Abonements' wich is often not understood. Useless GC button. Wish of personalization of the left navigation bar in general.

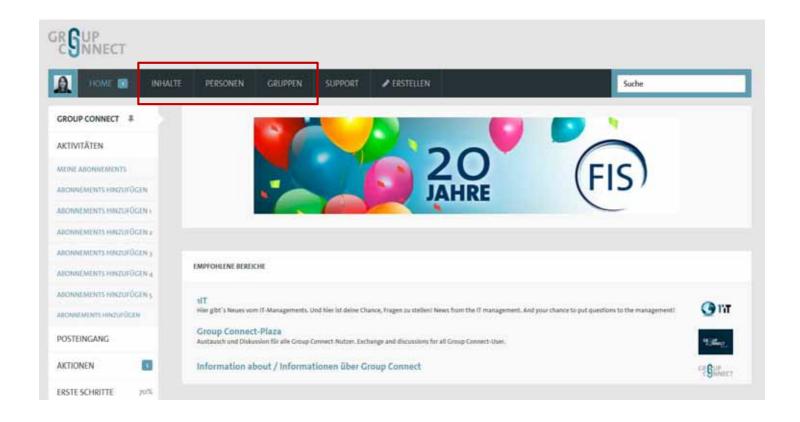


# **TOP NAVIGATION**

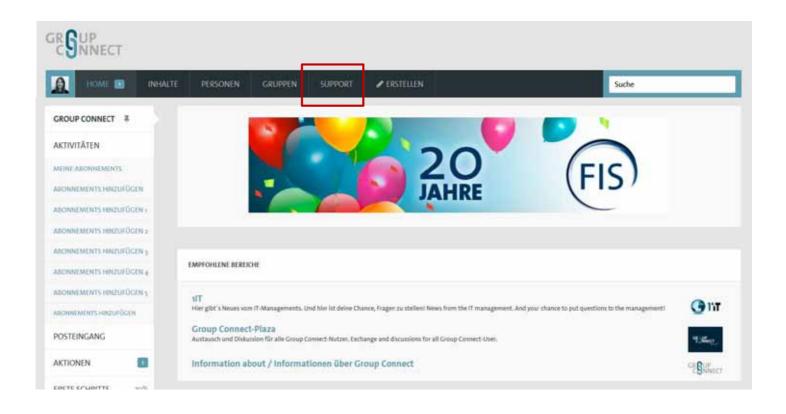
mainly used by middle users because beginners find it too complicated and complex. Experienced users use 'Suche' (SEARCH) for almost everything as they gave up on navigation menu

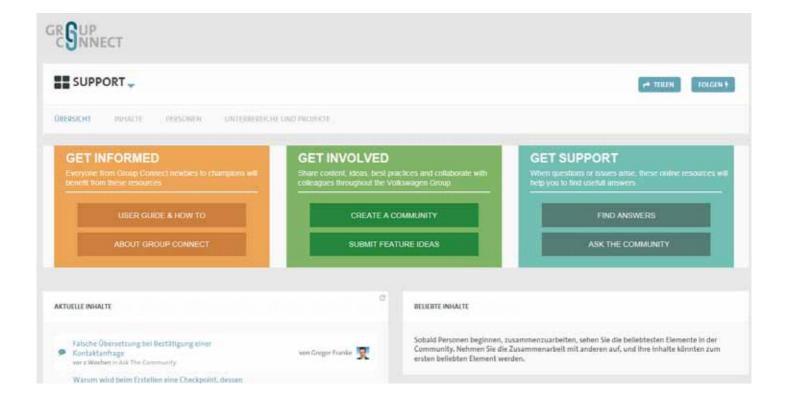


these are the most used buttons of the top navigation menu. 'Erstellen' (CREATE) and 'SUPPORT' are almost untouched as the one has double functions, present on other pages, the other is way to complex



'Starting guide' is the most often mentioned as bad function, and an introduction video is highly requested. 40% of heavy users don't even know the existance of 'SUPPORT' function and when they struggle they ask a collegue or call EHD (customer support service that costs to VW 10 euro/call)



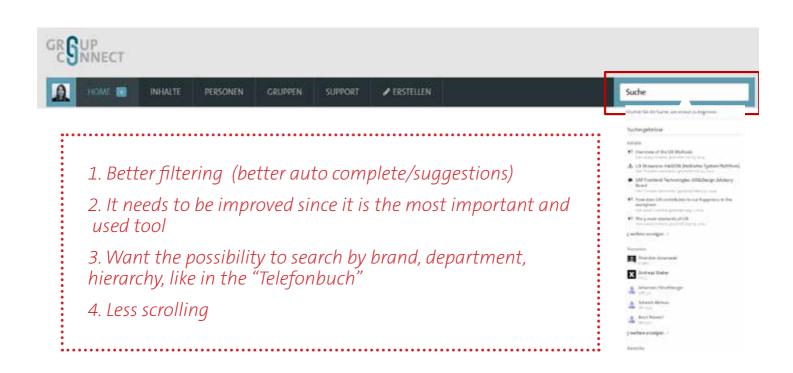


'Erstellen' (CREATE) as said is a navigation button that offers functionalities that are already present on other pages and easily accessible





The importance of 'Suche' (SEARCH) increases with the usage of GC: it becomes the main tool for navigation. 88% of users agree that the information'filtering' needs to be improved: by brands and by VW hierarchy

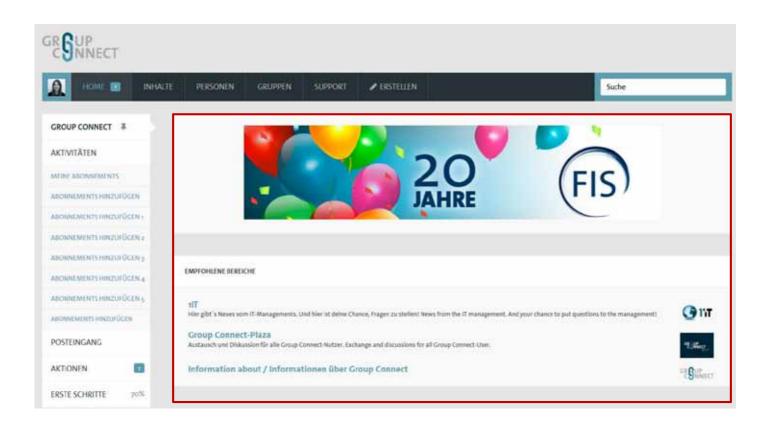


# 'Suche' (SEARCH), seen through the heatmap, underlines the heavy use of the button



# **CENTRAL CONTENT**

unclear what it is actually saying and heavy waste of space for example through banner that nobody looks at. 1IT is not intuitively to be found. Wish of personalization of homepage











# ERSTELLEN

Suche

### HOUR CONNECT

### AKTIVITÄTEN

### DECEMBER PROPERTY.

MARKET BEFORE

ABONNESS SHIPDFOCEN (

ASSESSMENT OF THE PROPERTY OF

ABONNEMENTS HINZUFÜGEN 5

RECHIVEMENTS HINZURDONNA

### dionnesients reszurücen ç

ADMINISTS HINZSTOCKY

### STEINGANG

PHRITTE

60%

A ANKONDIGUNG: Nichste Qualifizierung für Community Manager für Group Connect. Community



### EMPTOHILENE BEREICHE

Her gitt's bears som IT-Managements. Und har sit deine Cross 👉 sym as stellers Neses from the IT management. And your chance to gut questions to the management.

Group Connect - Plaza
Antawah and Description for alle Group Connect Austral 1 and discussions for all Group Connect Asset

Informationen über Group Connect.







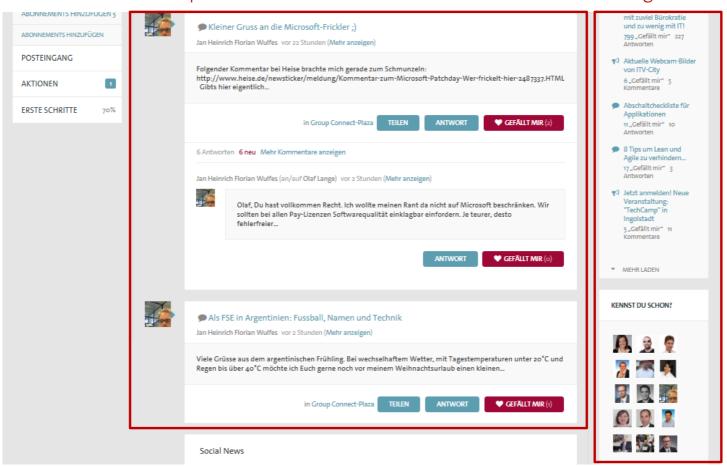




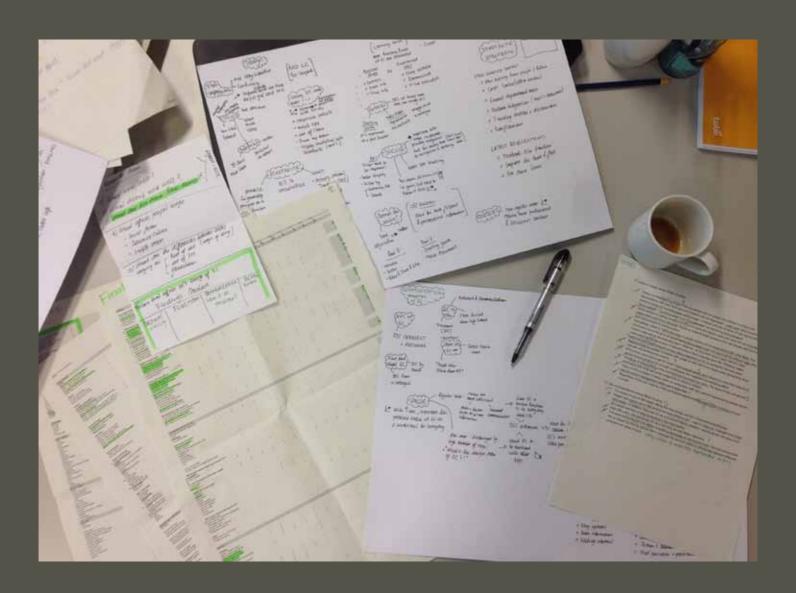


Alle request Mitglieber property

# lack of personalized and filtered content



bad algorithm!



# WHAT SHOULD BE KEPT

Acitvity Stream/Inhalte

Suche

Follow & Share & Like

People Suggestion

Group Connect Plaza

Subscription to Groups

News

# **OVERALL GOOD AND BAD FUNCTIONS**

My Abonements

Beginner's guide/Support

Content (personalizable) on Homepage

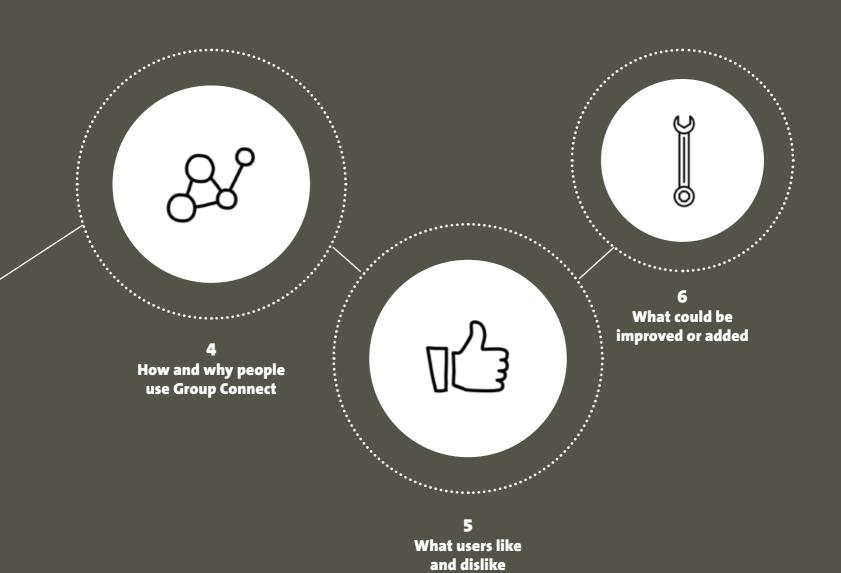
New GC members Suggestion

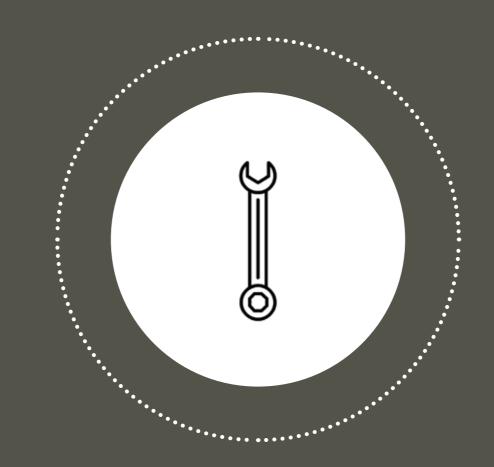
Erstellen

Too many notifications

WHAT SHOULD BE CHANGED







## What could be improved or added

In this phase of the research I played with the interviewees using design methods.

I organized a selection of appreciated functionalities through a design thinking tool and invited the interviewees to give suggestions of new or missing functionalities and to circle their existing favourite ones they wanted to keep.

Finally I asked them to develop a Homepage Mock-up with the help of prototyping tools, based on the selected functionalities previously selected.

## 7.CO- DESIGN WORKSHOP

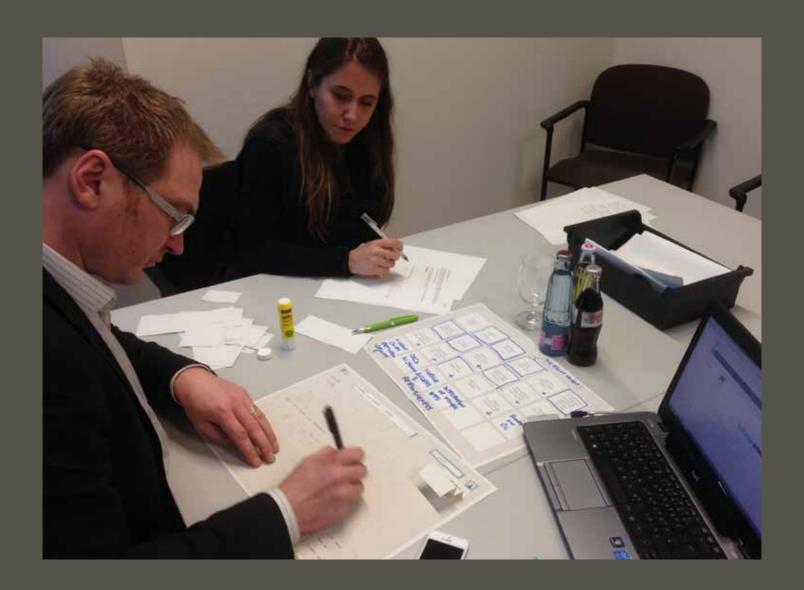
A: Sie sind ja ein Hauptnutzer dieses Systems. Und wir wollen Ihnen das Leben erleichtern. Stellen Sie sich bitte vor, Sie sind Leiter der IT und können den Kollegen der Entwicklung nun sagen, was diese unbedingt bei der weiteren Entwicklung beachten sollten. Was wäre das? Warum?

Wie sieht also Ihr ideales System der Zukunft aus?

Verwenden Sie bitte das Material dass Ihnen zur Verfügung gestellt wurde um eine verbesserte Darstellung der Group Connect Startseite durch einen Mock-up herzustellen.

**GIVE MATERIAL** 

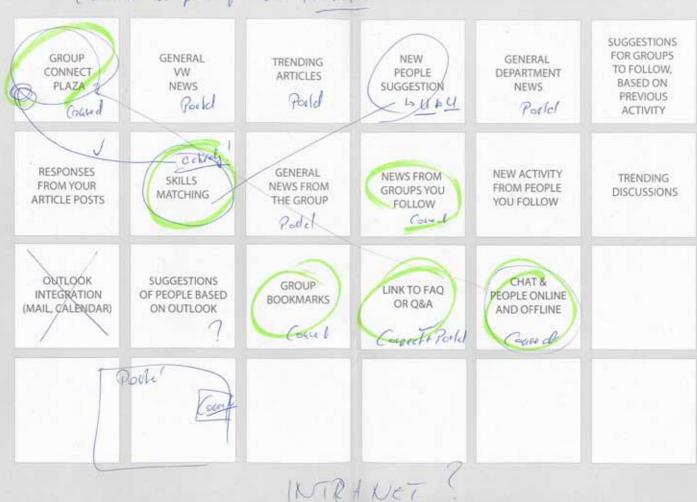
B: Bitte beschreiben Sie Ihren Prototypen.



GROUP CONNECT PLAZA	GENERAL VW NEWS	TRENDING ARTICLES	NEW PEOPLE SUGGESTION	GENERAL DEPARTMENT NEWS	SUGGESTIONS FOR GROUPS TO FOLLOW, BASED ON PREVIOUS ACTIVITY
RESPONSES FROM YOUR ARTICLE POSTS	SKILLS MATCHING	GENERAL NEWS FROM THE GROUP	NEWS FROM GROUPS YOU FOLLOW	NEW ACTIVITY FROM PEOPLE YOU FOLLOW	TRENDING DISCUSSIONS
OUTLOOK INTEGRATION (MAIL, CALENDAR)	SUGGESTIONS OF PEOPLE BASED ON OUTLOOK	GROUP BOOKMARKS	LINK TO FAQ OR Q&A	CHAT & PEOPLE ONLINE AND OFFLINE	

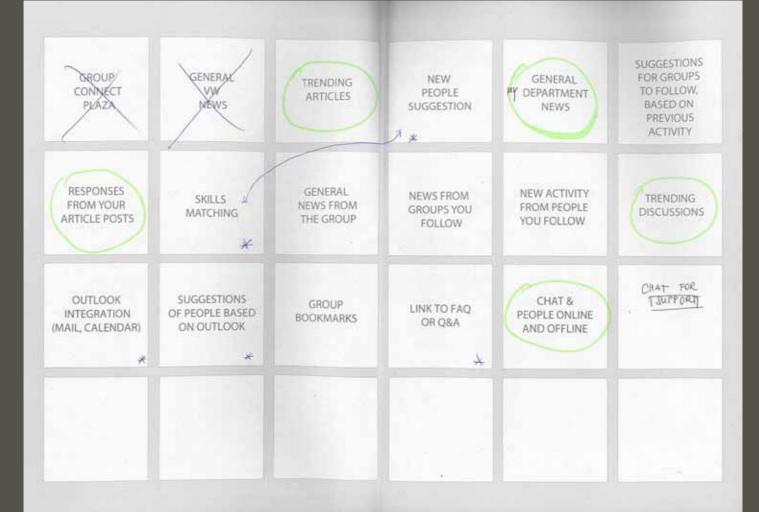


Council or port of Us Portal.



GROUP CONNECT PLAZA	GENERAL VW NEWS	TRENDING ARTICLES	NEW PEOPLE SUGGESTION	GENERAL DEPARTMENT NEWS	SUGGESTIONS FOR GROUPS TO FOLLOW, BASED ON PREVIOUS ACTIVITY
RESPONSES FROM YOUR ARTICLE POSTS	SKILLS MATCHING	GENERAL NEWS FROM THE GROUP	NEWS FROM GROUPS YOU FOLLOW	NEW ACTIVITY FROM PEOPLE YOU FOLLOW	TRENDING DISCUSSIONS
OUTLOOK INTEGRATION (MAIL, CALENDAR)	SUGGESTIONS OF PEOPLE BASED ON OUTLOOK	GROUP BOOKMARKS	LINK TO FAQ OR Q&A	CHAT & PEOPLE ONLINE AND OFFLINE	

GROUP CONNECT PLAZA	GENERAL VW NEWS	TRENDING ARTICLES	NEW PEOPLE SUGGESTION	GENERAL DEPARTMENT NEWS	SUGGESTIONS FOR GROUPS TO FOLLOW, BASED ON PREVIOUS ACTIVITY
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GROUP CONNECT PLAZA	GENERAL VW NEWS	TRENDING ARTICLES	NEW PEOPLE SUGGESTION	GENERAL DEPARTMENT NEWS	SUGGESTIONS FOR GROUPS TO FOLLOW, BASED ON PREVIOUS ACTIVITY
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GROUP CONNECT PLAZA	GENERAL VW NEWS	TRENDING ARTICLES	NEW PEOPLE SUGGESTION	GENERAL DEPARTMENT NEWS	SUGGESTIONS FOR GROUPS TO FOLLOW, BASED ON PREVIOUS ACTIVITY
RESPONSES FROM YOUR ARTICLE POSTS	SKILLS MATCHING	GENERAL NEWS FROM THE GROUP	NEWS FROM GROUPS YOU FOLLOW	NEW ACTIVITY FROM PEOPLE YOU FOLLOW	TRENDING DISCUSSIONS
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GROUP CONNECT PLAZA	GENERAL VW NEWS	TRENDING ARTICLES	NEW PEOPLE SUGGESTION	GENERAL DEPARTMENT NEWS	SUGGESTIONS FOR GROUPS TO FOLLOW, BASED ON PREVIOUS ACTIVITY
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OUTLOOK INTEGRATION (MAIL, CALENDAR)	SUGGESTIONS OF PEOPLE BASED ON OUTLOOK	GROUP BOOKMARKS	LINK TO FAQ OR Q&A	CHAT & PEOPLE ONLINE AND OFFLINE	New Articles / Discussions from trerywhere
					Tag

GROUP CONNECT PLAZA	GENERAL VW NEWS	TRENDING ARTICLES	NEW PEOPLE SUGGESTION	GENERAL DEPARTMENT NEWS	SUGGESTIONS FOR GROUPS TO FOLLOW, BASED ON PREVIOUS ACTIVITY
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FROM YOUR / SKILLS NEWS FROM GROUPS YOU FROM	ACTIVITY TRENDING DISCUSSION:
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GROUP CONNECT PLAZA	GENERAL VW NEWS	TRENDING ARTICLES	NEW PEOPLE SUGGESTION	GENERAL DEPARTMENT NEWS	SUGGESTIONS FOR GROUPS TO FOLLOW, BASED ON PREVIOUS ACTIVITY
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OUTLOOK INTEGRATION (MAIL, CALENDAR)	SUGGESTIONS OF PEOPLE BASED ON OUTLOOK	GROUP BOOKMARKS	LINK TO FAQ OR Q&A	CHAT & PEOPLE ONLINE AND OFFLINE	



One News -SUGGESTIONS FOR GROUPS NEW GROUP GA GENERAL GENERAL TRENDING TO FOLLOW, PEOPLE CONNECT DEPARTMENT VW ARTICLES BASED ON SUGGESTION PLAZA NEWS NEWS **PREVIOUS** weres **ACTIVITY** GENERAL **NEW ACTIVITY** TRENDING RESPONSES NEWS FROM SKILLS FROM YOUR **NEWS FROM** FROM PEOPLE DISCUSSIONS **GROUPS YOU** MATCHING THE GROUP ARTICLE POSTS YOU FOLLOW FOLLOW Outlook Overall -Outlook (in4 calender integration Mail Integration a & A (FAQ) Die Suche.
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**New Activity from people I follow** 

Chat

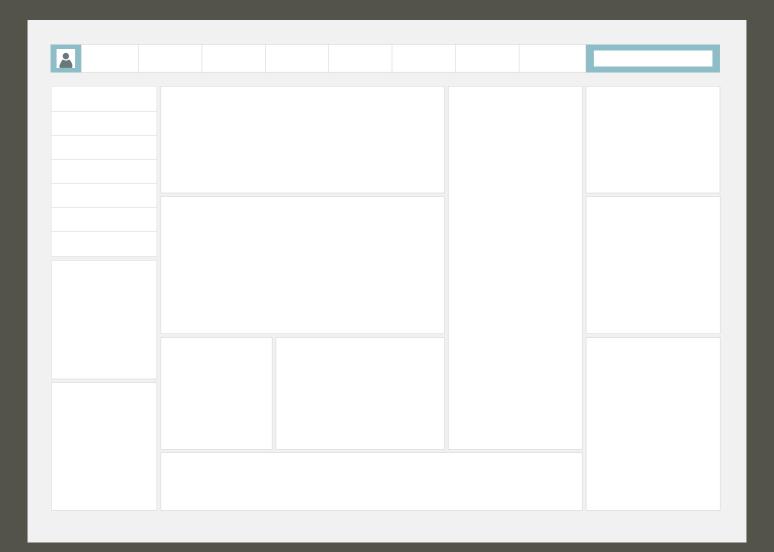
**General department news** 

**Outlook integration** 

Trending articles & discussions

Notifications (through icon language)





- sured news (dep bread)

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Tranding Discussions

Group Bookmarks

Group Connect Plaza

Link FAQ/Q&A

Empfohlene Bereiche

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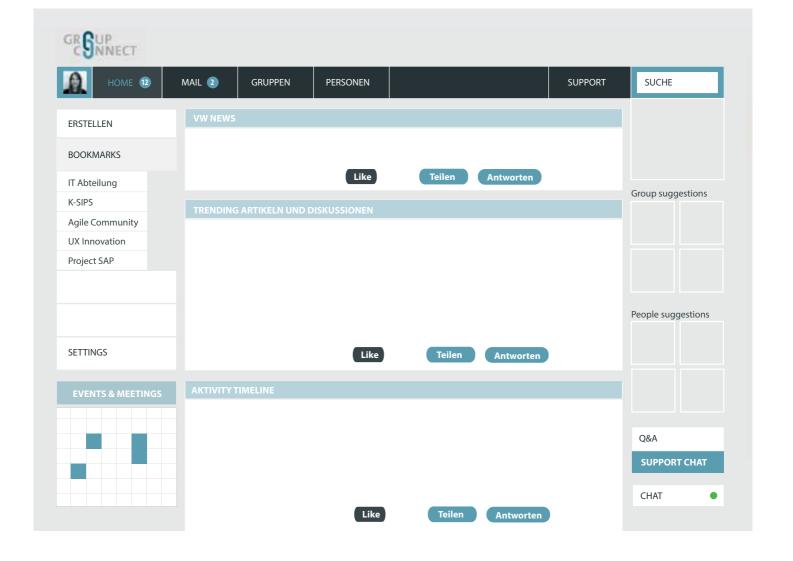
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Improve the look & feel

Icon language

Personalizable (Windows 8 structure appreciated)

Use the space at its best!



### **UX SCORE**

The digital world has forced us to move beyond usability measurements. To understand the total user experience we must consider learnability, product fit and engagement, as well as look and feel. To do this, I have developed the UX Score, a proprietary tool to measure the subjective perception of user experience.

I evaluate three facets of user experience:

These dimensions provide a comprehensive view of both usability and user experience of your product. With the UX Score, you gather standardized data of subjective user feedback, which can be benchmarked with your competitors' products.

The UX Score builds a bridge between scientific approach and the practical world. The UX Score is extremely easy to understand and provides valuable insights for a product and the corresponding brand, enabling you to improve products and enhance customer satisfaction.

The UX Score captures all relevant facets of UX, generating results that are directly practicable and provide a comprehensive understanding of how users interact with these products.

- 1. task-oriented qualities (learnability / operability)
- **2. self-oriented qualities** (product fit / inspiration)
- 3. aesthetic qualities (look and feel)

### 8.UX SCORE

1) Ich v	verstehe die von	Group Connect	benutzen Begri	ffe und / oder Sy	ymbole.	
Tifftvo	ollund ganzzu					Trifftüberhauptnichtzu
2) Die	Bedienung lernt	man so nebenb	ei, ohne groß na	ichdenken zu m	üssen.	
Tifftvo	llund ganzzu					Trifftüberhauptnichtzu
3) Dies	ses Produkt lässt	sich so bediene	n, dass es imme	r das tut, was ic	h möchte	2.
Tifftvo	ollund ganzzu					Trfftüberhauptnichtzu
4) Fun	ktionen und Info	ormationen finde	en sich immer da	a, wo ich sie erw	arte.	
Tifftvo	ollund gan zzu					Trifftüberhauptnichtzu

5) Die Nutzung vo	on Group Conne	ect ist auf eine ai	ngenehme Art h	erausfordernd	•	
Trifftvollund ganzz	u				Trifftüberhauptnichtz	u
6) Group Connect	t auszuprobiere	en und zu nutzen	, war spannend			
Trfftvollund ganzz	u				Trifftüberhauptnichtz	u
				$\boxtimes$		
7) Group Connect	t bietet interess	sante neue Funk	tionen.			
Trifftvollund ganzz	u				Trifftüberhauptnichtz	u

8) Group Connect	passt zu mir.									
Trifftvollund ganzzu	1				Trifftüberhauptnichtzu					
				⊠						
9) Ich bin gerne ei	n Group Con	nect Nutzer.								
Tr <b>f</b> ftvollund ganzzu	1				Trfftüberhauptnichtzu					
10) Group Connect bietet genau die Funktionen die ich brauche.										
Trifftvollund ganzzu	1				Trfftüberhauptnichtzu					
11) Die Optik des S	Systems gefä	llt mir.								
Trifftvollund ganzzu	1				Trifftüberhauptnichtzu					
12) Group Connec	t sieht hochv	vertig aus.								
Tr <b>i</b> fftvollund ganzzu	1				Trifftüberhauptnichtzu					

### **UX SCORE**



What is marked red represents the scores under 45 and therefore the biggest issues of the service



# DISCOVER & DEFINE

1

- **1.2** UX Design

**1.1** Initial Brief

**1.3** Research & Analysis

INTERPRET & SYNTHETISE

2

**2.1** insights

### **INSIGHTS**

In the first phase I solved the problem of the usability of Group Connect and the results will be soon translated into User Interface adjustments that will satisfy people's needs and complains. But during the research process I gained insight on interesting and unexpected other findings. In fact, Group Connect's problem of the low number of users is also related to a bad communication and to a wrong perception of the platform's value. How many users see Group Connect seems to be diffrent from how the founders of the service see it.

Moreover there are more than one typology of user and therefore different point of views on the topic related to the social and communication factors.

For all these reasons I saw the urge of going through a second phase of research in order to define the different typologies of users and the different kind of needs, with the aim of solving all of the problems and not only that of the UI.

# DISCOVER & DEFINE

1

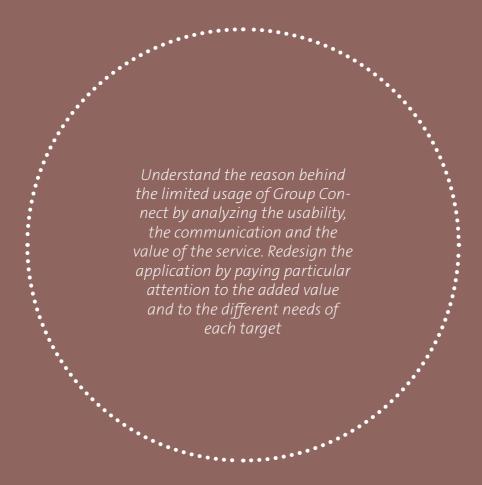
- **1.1** Initial Brief
- **1.2** UX Design
- **1.3** Research & Analysis

# INTERPRET & SYNTHETISE

2

- **2.1** insights
- **2.2** Brief's evolution

### **BRIEF'S EVOLUTION**





### **ADDITIONAL PROBLEMS**

This analysis went quick since the majority of work was done in phase 1. Nevertheless the clustering took a long time, since the opinions on the topic of the value, the social factors and the need of the service opened wide discussions. What came out, though, is that the usability of the service is not the only problem and the only reason behind the low usage of Group connect.

There are 3 main problems based on quantitative and *qualiative* analysis:

### 1.USABILITY

The first problem of the usability has been analyzed and can be now translated into effective solutions and changes.

### 2.VALUE

The third problem is related to the value of Group Connect itself. The meaning and reason of Group Connect to exist isn't clear to everybody and there seems to be the need to give an added value to the service.

### 3.COMMUNICATION

The second problem is related to the way Group Connect is communicated and advertised.

Based on these three problems and on the profile of the 16 interviewees, we developed three different personas that reflected mostly the issues listed and the several ways of using Group Connect. The personas have been created following design methodologies. Mixing the problems, the personalities, the needs, the suggestions and the usage habits, gave as a result 3 personas that fit unexpectedly well with the 3 problematics discovered.

### 1.CONTRIBUTOR

The first problem of the usability has been analyzed and can be now translated into effective solutions and changes.

### 2.COLLABORATOR

The second problem is related to the way Group Connect is communicated and advertised.

### 3. PASSIVE FOLLOWER

The third problem is related to the value of Group Connect itself. The meaning and reason of Group Connect to exist isn't clear to everybody and there seems to be the need to give an added value to the service.







# DISCOVER & DEFINE

INTERPRET & SYNTHETISE

IDEATE & DEVELOP

3

- **1.1** Initial Brief
- 1.2 UX Design
- **1.3** Research & Analysis

- **2.1** insights
- **2.2** Brief's evolution

**3.1** Co-Design tools

### CO-DESIGN TOOLS

The findings of the first phase of the research process show how the problem of the low usage of the service is truly depending not only on a bad UI but more on the bad communicated value of the service and on the poor communication. The second phase of the process takes therefore this three main problems and tries to give a solution to them. I identified three personas that relate to each problem and using additional Design thinking tools, I brainstormed and developed concept solutions based on their needs.

By using the Design Thinking method and Co-Design tools I was able to efficiently cluster the qualitative analysis' results.

- 1. Wireframe Mock-up (based on overlapped wireframe mock-ups of interviewees)
- 2. Personas identification
- 3. Concept development chart





Users and other figures can be come part of the design process as expert of their experience, but in order to take on this role they must be given appropriate tools for expressing themselves.

The designers should provide ways for people to engage with each other as well as instruments to communicate, be creative, share insights and envision their own ideas. The co-design activities can support different levels of participation, from situation in which the external figures are involved just in specific moments to situations in which they take part to the entire process, building up the service together with the designers.

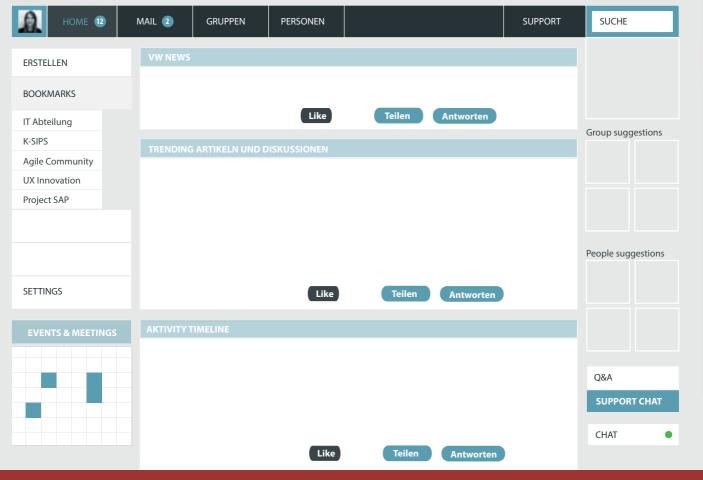
# 1

### **WIREFRAME MOCK-UP**

based on overlapped wireframe mock-ups of interviewees

This tool is necessary in order to give an idea of how the future user interface will look like and at the same time it serves as a summary of all the user experience research results to remember what user like, don't like and want. On this basis solutions to the other two problems can be built up.





# 2

### **PERSONAS**

based on the three main user's typologies identified

The purpose of personas is to create reliable, realistic representations of your key audience segments for reference. They are useful in considering goals, desires, and limitations of users in order to guide decisions about a service, product or interaction space such as features, interactions, and visual design of a website. A user persona is a representation of the goals and behavior of a hypothesized group of users. In most cases, personas are synthesized from data collected from interviews with users. They are captured in 1/2 page descriptions that include behavior patterns, goals, skills, attitudes, and environment, with few fictional personal details to make the persona a realistic character. For each service, more than one persona is usually created, but one persona should always be the primary focus for the design.



	•	PERSONALITY	UNDERSTANDING OF GROUP CONNECT VALUE
	Ш	READINGS	GC IS LIKE  USAGE OF GROUP CONNECT
	<b>Æ</b>	HOBBY	TIME OF USE WHY
NAME AGE FROM	34	SPORT	HOW
POSITION DEPARTMENT COMPANY	Ĥ	CHRISTMAS CIFT	MOST IMPORTANT FUNCTIONS
MARITAL STATUS KIDS		PHONE	WHAT GROUP CONNECT IS MISSING LAYOUT AND NAVIGATION
ANIMIS	ದ	SOCIAL MEDIA	STARTSEITE
	B	TECHNOLOGY	
	₽	WORK	ee 27

### PERSONAS IDENTIFICATION

Through this template, I was able to identify three different typologies of users that perfectly relate to the three main issues of:

1. USABILITY
2. VALUE
3. COMMUNICATION



The groups defined by the three personas are:

1. CONTRIBUTOR
2. COLLABORATOR

3. PASSIVE FOLLOWER



NAME Henning Roth
AGE 41
FROM Hannover, DE
POSITION Project manager
DEPARTMENT IT
COMPANY Volkswagen

MARITAL STATUS Married

KIDS 2

ANIMALS Red fish







... observing "analogous" situations ...

will often jolt us out of the frame

of reference that makes it so difficult

to see the larger picture.

- TIM BROWN -



### PERSONALITY

- self confident
- likes public speaking and sharing his opinion



### READINGS

- news & books about his field
- magazines about new frontiers and latest technologies





### HOBBY

- somelier course



### SPORT

- squash once a week (with his friend)
- swimming sometimes in the morning before going to work

### CHRISTMAS GIFT



- smartwatch
- go pro camera (also to use with his kids)

### PHONE



- Iphone 5
- screensaver with inspiring quotation from his Idol

### SOCIAL MEDIA



- loves to share information and new discoveries with others active on social media
- has more than 3 accounts on different social media and uses it for fun as well as work (Xing, Facebook, LinkedIn, Google+)

### TECHNOLOGY



- early adopter
- likes to try out new Apps and services (especially the ones that facilitate his work)
- likes personalized and personalizable stuff and DIY products

### WORK



- dresses for success
- stays at work until late and even brings it home
- career driven

### UNDERSTANDING OF GROUP CONNECT:

### VALUE

- allows you to stay updated about topics he is interested in
- makes you connect with collegues across the company
- GC is an important step towards innovation

### GC IS LIKE

- Facebook merged with LinkedIn

### USAGE OF GROUP CONNECT:

### TIME OF USE

- every day (has a unique place in his work day)

### WHY

- stay updated about the latest news and hot topics
- see what other collegues think, share, like and with whom they connect
- share own opinion and viewpoint
- reach the management (show off a bit)
- advertise his projects

### HOW

- follow groups, colleagues and especially management/influent people
- comment and discuss in groups and other people's posts
- find and network with people with similar interests
- write and share articles and ideas

### MOST IMPORTANT FUNCTIONS

- Suche
- Blogeintrag
- Activity stream
- Follow
- Search for people

### WHAT DOES HE WANT IN GROUP CONNECT:

### LAYOUT AND NAVIGATION

- responsive and mobile friendly
- icon lanauaae
- better look and feel (would like to have it more like Facebook)

### STARTSEITE

- more professional and relevant content
- improved activity stream/ timeline (inspired by Facebook timeline) with a better algorithm that shows filtered information based on your likes, interests and profile information

### FUNCTIONS

- Suche with better filters (filter through brand + show number of results and divide it by hierarchy)
- Chat function (show online and offline people)
- Live Chat support
- Outlook integration (especially for events, meetings, calendar and contacts)
- Search people through skills / People suggestion based on the same skills
- Tool for crossdepartmental collaboration

HOW CAN WE OPTIMIZE GC'S INTERFACE TAKING ISPIRATION FROM THE MOST USED

SOCIAL MEDIAS, TO MAKE HENNING MORE EFFICIENT AND SATISFIED WHEN USING IT?

## 1 USABILITY



HOW CAN WE OPTIMIZE GROUP CONNECT'S INTERFACE TAKING INSPIRATION FROM THE MOST USED SOCIAL MEDIA, TO MAKE HENNING MORE EFFICIENT AND SATISFIED WHEN USING IT?



Jöerg Spichtlinger NAME AGE Cottbus, DE FROM Business consulter **POSITION** DEPARTMENT Volkswagen COMPANY

long term girlfriend **MARITAL STATUS** KIDS none but loves his nephew ANIMALS







It's about as fast as you can go without having to eat

airline food.

- PORSCHE -



### PERSONALITY

- very social and friendly
- loved by collegues which he meets even after work for a beer - car fanatic (this is why he loves to work in VW)



- VW news
- magazines about his field
- local newspaper



### HOBBY

- online aames - cinema



### SPORT

bowling



### **CHRISTMAS GIFT**

Inad



### PHONE

Blackberry



### SOCIAL MEDIA

not very active on social media but still uses Facebook to share pictures and connect with friends. Youtube to watch sport videos. Once in a while he checks LinkedIn.



### TECHNOLOGY

- still uses digital camera to take pictures instead of his phone
- likes functional and efficient stuff, where he doesn't have to spend much time on
- personalization has to be done by others



- hard worker. Likes to work efficiently to finish early and go home - rarely brings work home
- very supportive with colleagues, believes in power of collaboration

### UNDERSTANDING OF GROUP CONNECT:

- first step towards a collaborative culture within VW
- has a big unseen business potential
- cross-departmental networking

- Facebook when used for group work or team communication
- Slack (used for teamwork, supports communication and easy file exchange)

### USAGE OF GROUP CONNECT:

### TIME OF USE

- multiple times per week (more often if he uses it to collaborate on projects)

- collaboration and communication between collegues
- getting informed about the company and the latest news

- build groups and join group of interest (mainly for working purposes)
- organize project work online
- organize events and meetings

### MOST IMPORTANT FUNCTIONS

- Groups
- Calendar
- Messages
- Department and group news

### WHAT DOES HE WANT IN GROUP CONNECT:

### LAYOUT AND NAVIGATION

- better navigation menu with only the essential functions and less submenus
- to be optimized for his use but by someone else (difficult to personalyse)
- too much text and too small headlines

- more professional and relevant content
- improve the activity stream/ timeline with a better algorithm that shows filtered information based on your work related topics
- better use of the available space: e.g. no useless banners (waste of space)

### **FUNCTIONS**

- Tool for crossdepartmental collaboration or better collaboration within his department
- Suggestion of people based on skills (to trigger collabolation on new projects)
- GC has to be THE main point of contact and communication within the department and for project work (possibility to create projects ON the platform itself)
- Chat function + Group Chat
- Outlook integration (mostly for mail, projects and calendar tool showing meetings and events)

HOW CAN GROUP CONNECT TRIGGER CROSS-DEPARTMENTAL COLLABORATION

(WITHIN IT OR EVEN FOR THE WHOLE VW GROUP) ?

## 2 COLLABORATION



HOW CAN GROUP CONNECT TRIGGER CROSS-DEPARTMENTAL COLLABORATION (WITHIN THE IT OR EVEN THE WHOLE VW GROUP)?



Anne Rosenthal NAME AGE Wolfsburg, DE FROM Communication consultant POSITION DEPARTMENT IT Volkswagen

**MARITAL STATUS** looking for the love of her life KIDS not vet ANIMAIS cat



COMPANY





Lack of direction, not lack of time,

is the problem.

We all have twenty-four hour days.

- ZIG ZIGLAR

### PERSONALITY

- a bit shy and reserved
- afraid of being judged by others (e.g. ashamed of her english) very diplomatic, doesn't like to get into discussions with others





- Spiegel - VW news
- German celebrity gossip (when she is relaxing on the sofa at home)

### HOBBY

- coffee or wine with friends after work
- weekends outdoor visiting friends in nearby cities

### SPORT

- Zumba (with friends)
- Has a stationary bike at home where she works out in the morning



### CHRISTMAS GIFT

- Miyer
- Smartbox

### PHONE

- Samsung Galaxy 4



### SOCIAL MEDIA

- doesn't use social media
- scared of data loss
- cares about her privacy, doesn't understand the trend of showing off

### **TECHNOLOGY**

- needed only if it makes you more efficient
- late adopter
- uses technology mainly for work, doesn't need it at home
- has to be easy to use and already personalized

- works in VW because it offers a stable job and a good salary - not really career-driven
- never brings work home but stays often longer if necessary - likes to work concentrated and not get distracted

- new tool to connect between employees

UNDERSTANDING OF GROUP CONNECT:

### GC IS LIKE

- Facebook but with no risk of data loss

### USAGE OF GROUP CONNECT:

### TIME OF USE

- has an account but only logged in couple of times

### WHY

- curiosity
- read articles written by collegues
- get informed - network

### HOW

- follow people she knows to see if they post interesting articles
- join groups related to her work
- stay updated about VW news

### MOST IMPORTANT FUNCTIONS

- Support
- Activities

### WHAT DOES SHE WANT IN GROUP CONNECT:

### LAYOUT AND NAVIGATION

- navigation is confusing, she gets lost because of the excessive amount of options and apps
- personalized with only the functions that she needs for her work
- easier and more intuitive (colours and text size should be more clear)

- as a personalized "newspaper" supporting her work
- only important information related to her work and not distracting
- Homepage could be different for each department
- an introduction video to explain what is Group Connect and its value

### FUNCTIONS

- Support is completely confusing, too many information!
- wishes to have an explanatory video, a live chat support and an easy beginner's guide
- Outlook integration (mostly for mail, projects and calendar tool showing meetings and events)
- tools that can make her work more efficiently (what is the added value of Group Connect compared to other portals?), better communication

WHAT COULD BE CHANGED OR ADDED IN ORDER TO FINALLY BRING ANNE TO USE



## 3 COMMUNICATION



WHAT COULD BE CHANGED OR ADDED IN ORDER TO FINALLY BRING ANNE TO USE GROUP CONNECT MORE OFTEN?

### 3

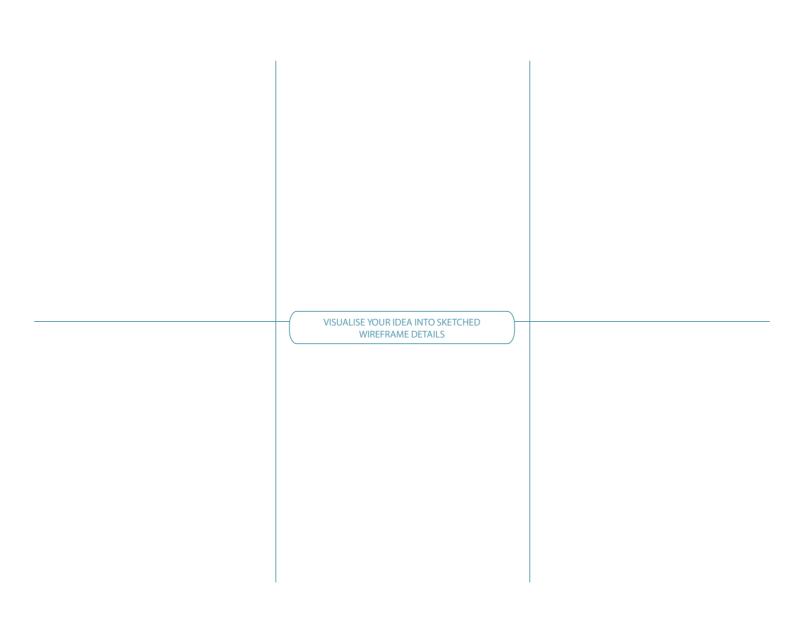
#### CONCEPT DEVELOPMENT CHART

from Brainstorming to Concept Development

The purpose of this tool is to select the best concepts generated by a collective brainstorming during a Co-Design workshop, in order to give one or more solutions to the three issues affecting Group Connect. The users, devided into three groups representing one personas and issue each, are invited to brainstorm, use post-its, sketch, discuss and write in order to describe the newborn idea. Each result has then to be presented and discussed in front of the other groups and eventually improved through advices and adjustments.



# CONCEPT DEVELOPMENT Describe the Concept Which are the benefits of your solution? Use post-its Place your best idea HERE and create a concept out of it How does this solve the main question?



# DISCOVER & DEFINE

1

- **1.1** Initial Brief
- 1.2 UX Design
- **1.3** Research & Analysis

# INTERPRET & SYNTHETISE

2

- **2.1** insights
- **2.2** Brief's evolution

# IDEATE & DEVELOP

3

- **3.1** Co-Design tools
- **3.2** Co-Design Workshop
- **3.3** Results

#### CO- DESIGN WORKSHOP

In order to find solutions that could satisfy each type of user and solve all of the three solutions, lorganized a Co-Design workshop. I invited many members of the Group Connect team, from the managers to the software developers; there were a mix of different employees that Linterviewed and members of the User Experience department, too. I payed attention to have people from different departments and made sure every one involved was happy and excited to take part to a Workshop in which the usual design methods and guidelines had been reinterpreted in order tobe more fun and more efficient to our purpose.

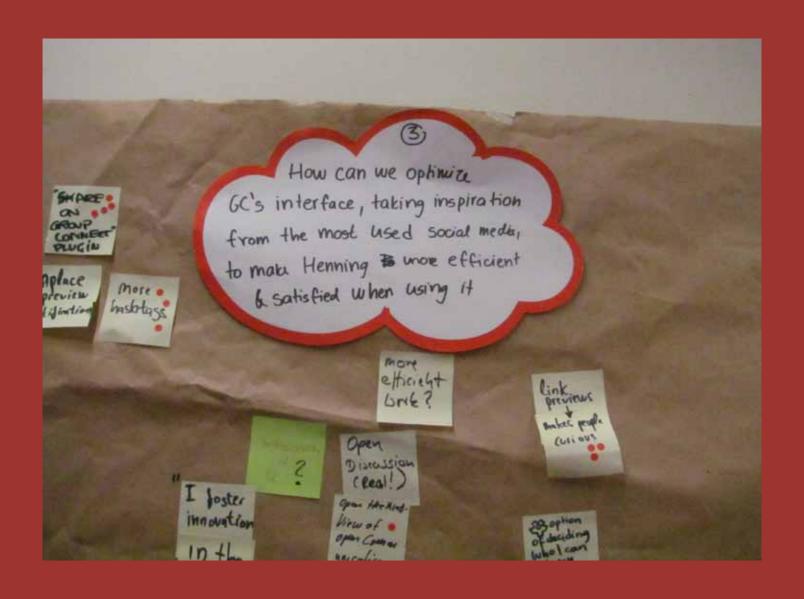
After a presentation of all the research and analysis findings, I devided the members of the Workshop into their groups and let

them brainstorm on the 'question' that each persona represented. After the brainstorming phase and some rounds of ideas and advices exchange, in which the best ideas were selected, I invited the groups to devolop the ideas further into concepts and finally present them to the rest of the teams.

This has been very helpful because it gave me a final confirmation of my doubts and brought the solution much further in a collaborative and agile way. At the same time I wanted the management of Group Connect to be involved so that they could experience the problematics and enter in the head of the different types of users not only through statistics and numbers but also by really imagining to be each one of them.

CONTRIBUTOR

HOW CAN WE OPTIMIZE GROUP CONNECT'S INTERFACE TAKING INSPIRATION FROM THE MOST USED SOCIAL MEDIA, TO MAKE HENNING MORE EFFICIENT AND SATISFIED WHEN USING IT?





CONCEPT, DESERVE MEND

"HOME"

instead of

· pure & infiltered information.
· Salf-driven relevance
· avoid span notifications

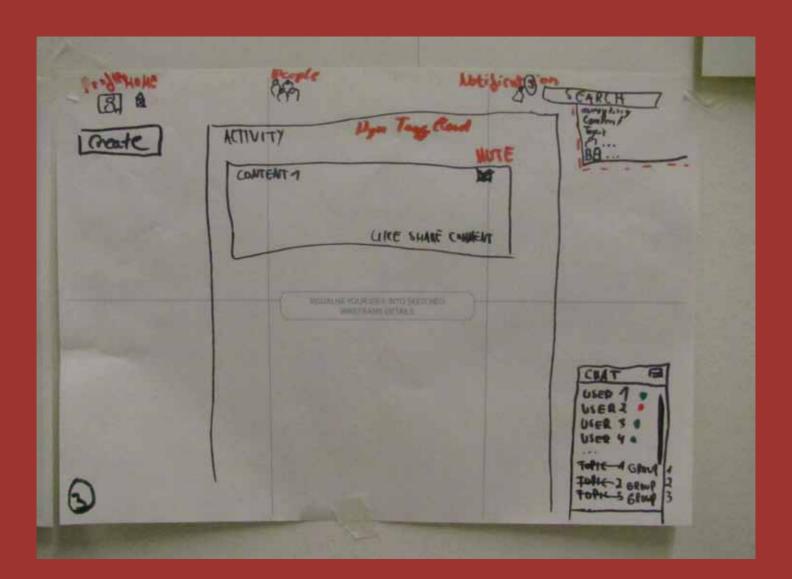
Which we the benefits of your tall your

· "USEr is king"
Lo decided decides what he sees
· distraction-free zone

How does the solve the main question?

he is capable to do this his "thing" he is getting more efficient

· fast communication & direct . also in certain topics groups - faster, event-based, fine-grained Communication - he is gotting more afficient



layout customization, too much information

SEE WIREFRAME

PURE AND UNFILTERED INFORMATION

SELF-DRIVEN RELEVANCE

**AVOID SPAM NOTIFICATIONS** 

ICON LANGUAGE IS MORE CLEAN

INPLACE PREVIEW NOTIFICATIONS

SHARE ON GC PLUGIN

KEYBOARD NAVIGATION

DYNAMIC TAG CLOUD

SEARCH HISTORY

#### **BENEFITS**

"USER IS THE KING"

HE DECIDES WHAT HE SEES

**DISTRACTION-FREE ZONE** 

NO SPAM

**QUICKER SEARCH** 

### HOW DOES IT SOLVE THE MAIN QUESTION

HE IS CAPABLE TO DO "HIS THING"

HE IS GETTING MORE EFFICIENT

slow, old-school customization

**CHAT FUNCTION** 

FAST AND DIRECT COMMUNICATION MOSTLY IN GROUPS

HASHTAG-CHAT

I DECIDE WHO CAN SEE MY STUFF AND WHO I CAN HIDE IT FROM

GC CONTRIBUTOR AS JOB ROLE

PRIZE THOSE WHO USE IT MORE

#### **BENEFITS**

FASTER, EVENT-BASED, FINE-GRAINED COMMUNICATION

### HOW DOES IT SOLVE THE MAIN QUESTION

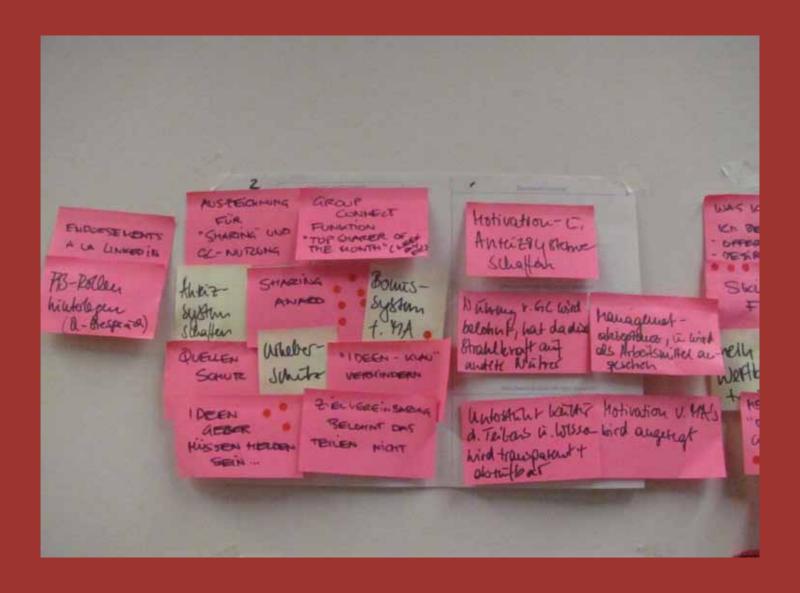
HE IS GETTING MORE EFFICIENT

COLLABORATOR

HOW CAN GROUP CONNECT TRIGGER CROSS-DEPARTMENTAL COLLABORATION (WITHIN THE IT OR EVEN THE WHOLE VW GROUP)?

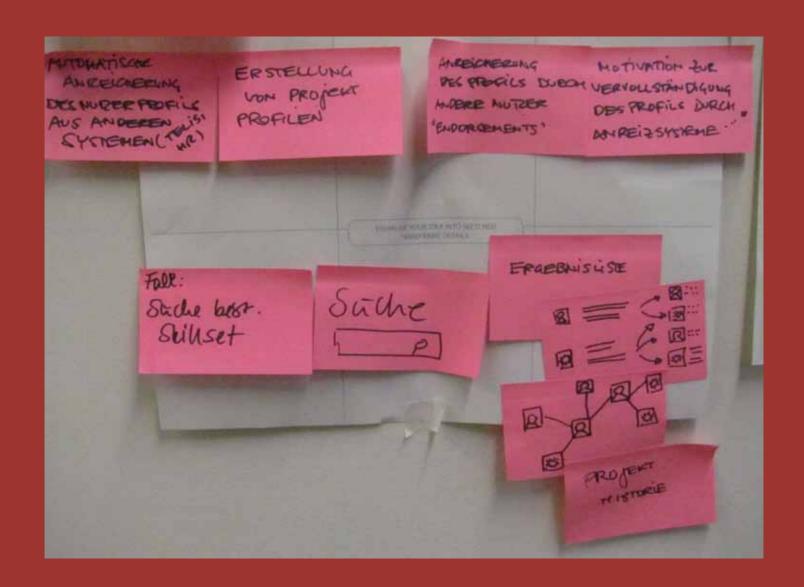








WHATARE HANY THINGS TO BE CLARIFIED ... THE INCENTIVES? WHO ARE THE STAKEHOLDERS? BUT : HAPPY QC-





missing incentive

SHARING AND GC USAGE AWARD

CREATE A TRIGGER SYSTEM FOR USAGE

**BONUS SYSTEM** 

IDEA COPYRIGHT: avoid stealing of ideas and protect the source

WORK TIME ALLOCATION FOR GC BY MANAGE-MENT

**IDEA GIVERS HAVE TO BE HEROES** 

TO FIND MOTIVATION

TRIGGER SYSTEM

ENDORSEMENT A' LA LINKEDIN

MNG ACCEPTS PROJECTS
BASED ON FEEDBACK LEFT BY
COLLEGUES (VOTING SYSTEM)

#### **BENEFITS**

USAGE OF GROUP CONNECT IS REWARDED

INFLUENCING POWER ON OTHER USERS

ACCEPTANCE BY MANAGEMENT
IS TRIGGERING THE USE OF
GROUP CONNECT

LESS HIERARCHY

HAPPIER USERS

**BECOME AN OPINION SETTER** 

### HOW DOES IT SOLVE THE MAIN QUESTION

SUPPORTS THE CULTURE OF SHARING

KNOWLEDGE BECOMES TRANSPARENT AND EASILY ACCEPTED

MOTIVATION OF THE COWORKERS STIMULATES THE OTHERS

GC weak as a collaboration tool

SKILL FINDER

**CREATION OF PROFILE PROJECTS** 

ENRICHMENT OF THE PROFILE THROUGH OTHER USER'S ENDORSEMENT

MOTIVATION THROUGH TRIGGER SYSTEMS (TELIS, HR)

CROSS-DEPARTMENTAL COLLABORATION ON PROJECTS

MORE PRECISE PROFILE (CHARACTERISTICS, KNOWLEDGE, PROJECTS)

STRENGHTEN PROFILE (TO ADD THE PROCESS KNOWLEDGE AS AN OPTION IN THE PROFILE)

"PEOPLE WHO LIKED THIS, ALSO LIKED..."

PROFILES: CONNECTOR /

PROFILES FOR PROJECTS

**ONTOLOGIE FUNCTION** 

#### **BENEFITS**

MORE PRECISE SEARCH RESULTS

SHORTER SEARCH TIME / FASTER RESEARCH

SYNERGIES UNDER RIGHT WAY

FIND PEOPLE WITH SIMILAR IDEAS AND WORK ON SAME PROJECT

USE THE POWER OF VIRTUAL COLLABORATION

INDIVIDUAL SKILLS CAN FINALLY EMERGE

IDEA GIVERS CAN BE HEROES

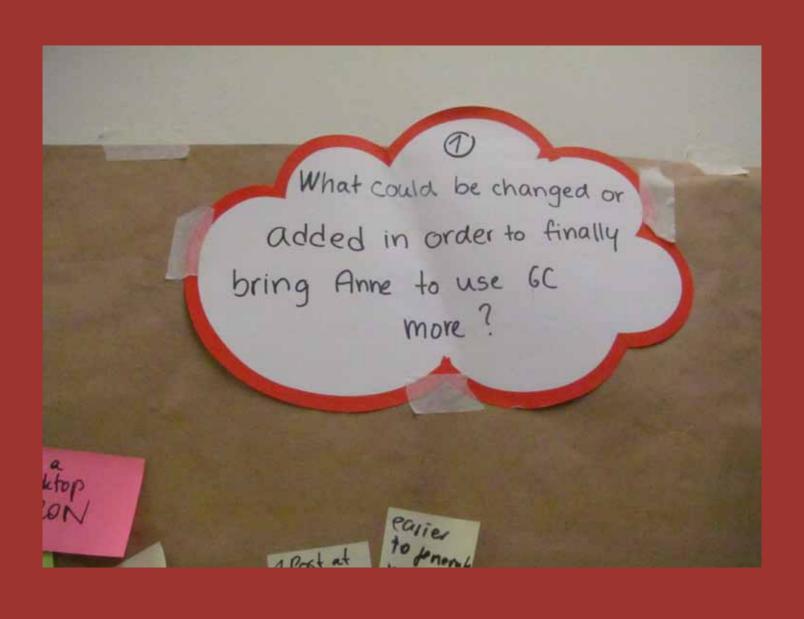
### HOW DOES IT SOLVE THE MAIN QUESTION

TO BRING TOGETHER BUSINESS KNOWLEDGE ABOVE ORGANIZATIONAL BOUNDARIES

INTEGRATION OF DIFFERENT HIERARCHICAL LAYERS

# PASSIVE FOLLOWER

WHAT COULD BE CHANGED OR ADDED IN ORDER TO FINALLY BRING ANNE TO USE GROUP CONNECT MORE OFTEN?





shows the business v volve - base for communication marketing tools ~ Interaction show better understanding Cases it's ob getting New convects & blooded information for Ke 1stphe



- My contracts

My contracts

- Mount Bailtray

- transmirlan

- t

Welcome to
GC!
Join the
Beginner
Community

- Dolinh

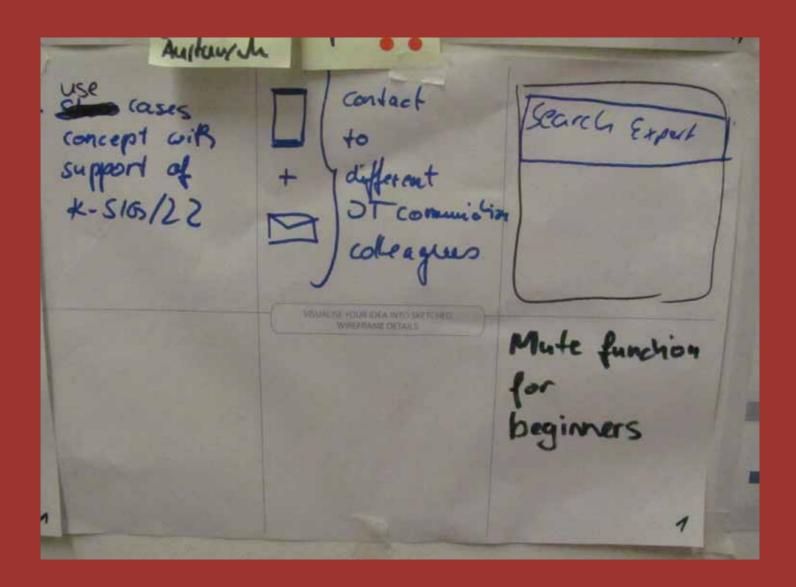
us dishibuted by

For now employers in the

Infomail

Dear new
GL user
Some information
about your account
I the function
group rouned Quande

+ Jesktop Joon





social issues and the question 'why another app?'

MUTE FUNCTIONS FOR BEGINNERS

DIFFERENT INTERFACE FOR BEGINNERS AND EXPERTS

SEARCH FOR AN EXPERT WHO CAN HELP OUT

USE CASES WITH SUPPORT OF K-SIG/22

CONTACT WITH DIFFERENT IT COMMUNICATION COLLEGUES

SHOWS THE BUSINESS VALUE

BASE FOR COMMUNICATION

BASE FOR MARKETING TOOLS

#### **BENEFITS**

BETTER UNDERSTANDING ON HOW TO IMPLEMENT GROUP CONNECT IN THE DAILY WORK

**EASY GETTING NEW CONTACTS** 

GET RELEVANT WORK INFORMATION

FEARLESS COMMUNICATION

FASTER, DIRECT COMMUNICATION

# HOW DOES IT SOLVE THE MAIN QUESTION

FEELING SAFE

UNDERSTANDING THE ADDED VALUE

#### confusing layout and structure

••••••••••

#### **HOMEPAGE LAYOUT:**

'Support' - top right
'Home' / 'Mail' / 'People' as icons - top left
'IT News' - center
'My communities' - center
'My contacts' - center

#### LEFT NAVIGATION BAR FUNCTIONS:

'New Eintrag'
'New comment'
'Kalendareintrag'
'Create a project'
'FAQ'

#### TOOLS:

A 'Welcome page' for new members Suggestion to beginners, community as a link Should be distributed by HR to all employees 'InfoMail' 'Direct Support Mail' 'GC as desktop icon'

EASY SELF DESCRIBING NAVIGATION

**USING SOME ICONS** 

**PERSONALISATION** 

COMMUNICATION CONCEPT FOR BEGINNERS

COHERENT NAVIGATION

HOMEPAGE AS TIMELINE LIKE FB

BETTER NAMING OF THE FUNCTIONS

PART FOR 'NEW EMPLOYEES'

#### **BENEFITS**

CLEARER

**EASIER TO USE** 

TIME SAVING

FROM PUSH TO PULL EFFECT

NOT FRUSTRATING

### HOW DOES IT SOLVE THE MAIN QUESTION

**ERASE THE BARRIERS** 

EASIER TO JOIN GROUP CONNECT

LEARN FROM EXISTING GLOBAL SOCIAL NETWORKS