

A photograph of a modern glass-fronted building, likely a university, with the Glasgow Caledonian University logo and name visible on the facade. The image is partially obscured by a blue vertical bar on the right side of the slide.

# The power of the collective

A presentation for ShareTEC,  
by

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# Challenge

Issues related to the role resources play in constructivist-oriented learning processes, both formal and informal.



# What

## Continual learning

Individuals direct their own learning and development, maintaining their employability, and creating their own opportunities in the face of radical transformations in society and the workplace.



# What

*'... learners (rather than some instructor) are in charge of their learning, by setting their learning goals, by monitoring their learning progress, and by choosing the time and place of learning. This type of informal learning might be framed as a form of self-regulated learning which requires a specific learning competence.'*

Schulz and Robnagel, 2010

## Connectivism

‘Learning is a process of creating networks connecting people, resources and organisations...’

Siemens, 2006

## Knowledge creation metaphor

*'... A kind of individual **and** collective learning that goes beyond information given and advances knowledge and understanding: there is collaborative systematic development of common objects of activity'*

Paavola and Hakkarainen, 2005

## Groups, networks, collectives

‘... All of us learn as an inseparable part of the Many - the range of distinct groups, networks, communities or collectives that are part of our lives ...’

Dron and Anderson, 2007

(see also Sloep and Koper, Hardt and Negri, 2006 )

## Collectives

‘... allow access to the unpredictable, and yield spontaneous and serendipitous learning and knowledge sharing.’

**Sunstein, 2001**



# Charting collective knowledge

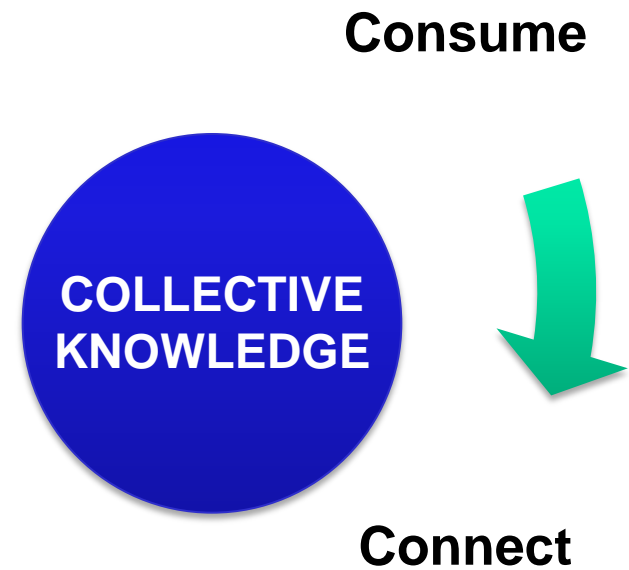


# Charting collective knowledge

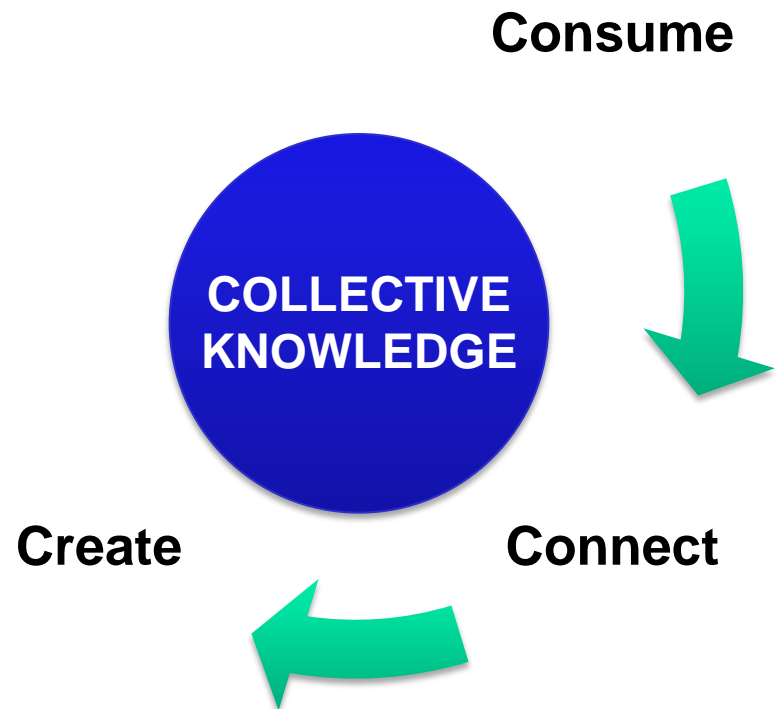
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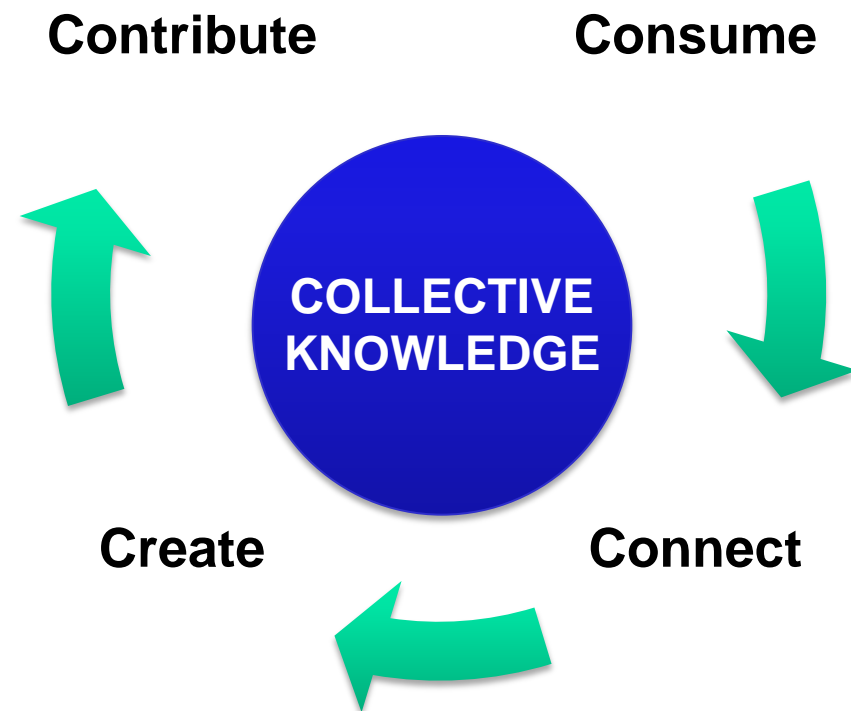
# Charting collective knowledge



# Charting collective knowledge



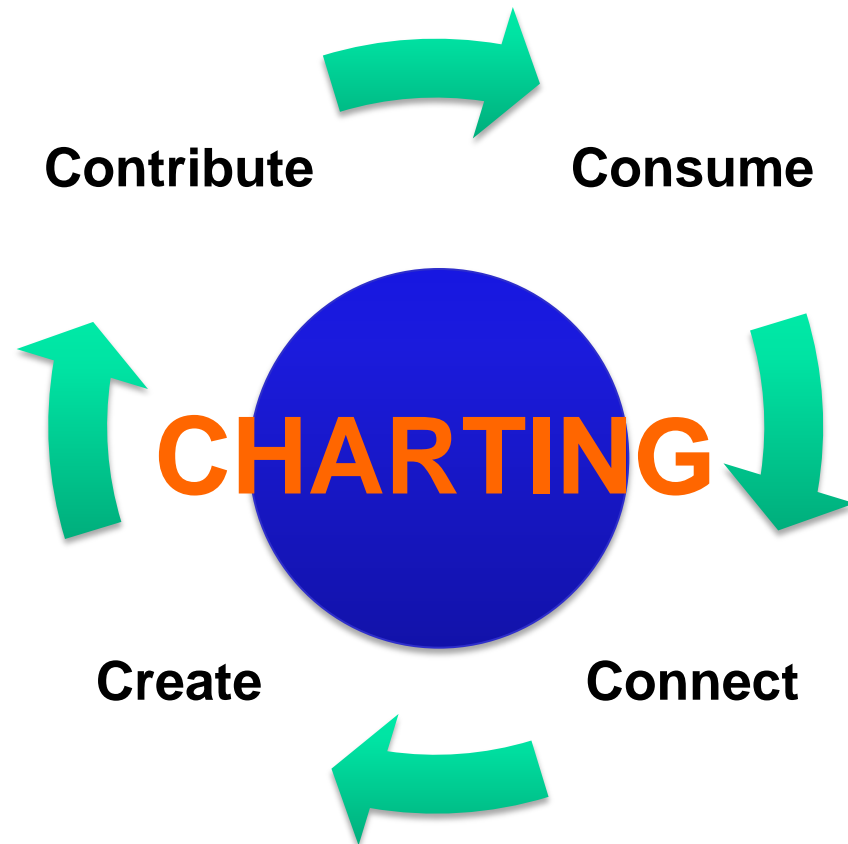
# Charting collective knowledge



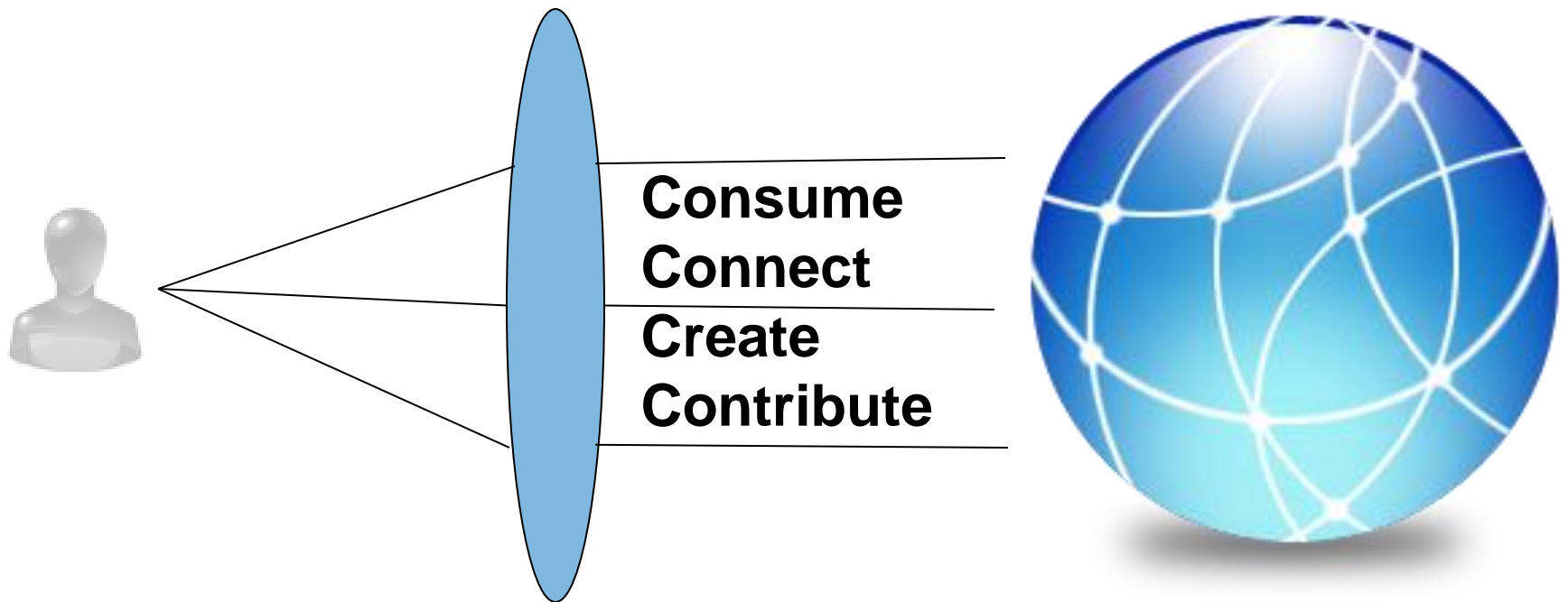
# Charting collective knowledge



# Charting collective knowledge



# Charting collective knowledge



The  
Individual

Their  
Goals

Groups, Networks  
and the Collective



# Charting collective knowledge

‘... charting helps *the individual* manage his/her interaction with *the collective* – the people, information data and knowledge with whom he will learn: consuming ideas, connecting and creating new knowledge and contributing this back to the collective.’

# Origins of our work

## Partnership with Shell

- Investigation of knowledge workers' current learning pathways
- Blue skies thinking

## Typical Knowledge Worker

- Undertaking little or no training or formal courses
- Working within an interdisciplinary team – operating as domain expert
- Managing multiple activities
- Learning with and from others in their network

# Origins of our work

## Questions

What do people learn through work?

How do they learn?

Who do they learn with?

**Context:** Global knowledge sharing networks

**Period:** Sept 08-Apr 09

**Mixed method:** Questionnaire (Cross and Parker, 2004) & semi-structured interviews (critical incident)

**Sample:** survey: n=462; interviews: n=29

# Origins of our work: *what* people learn through work

## **Know-what (Conceptual knowledge)**

Acquiring core technical knowledge  
Learning about other disciplines  
Understanding internal/external context

## **Know-How (Procedural knowledge)**

Lab skills  
Using company-specific technology  
Delegation skills  
People management skills  
Time management and prioritising  
Project management  
Collaboration skills  
Virtual team working

## **Know-where (Locative knowledge)**

Developing personal networks  
Knowing who to ask

## **Personal Development (Dispositions)**

Learning to become assertive  
Understanding own strengths and weaknesses  
Developing confidence  
Learning to manage stress

## **Enculturation**

Developing visibility in the company  
Understanding 'big picture'  
Learning to navigate workplace politics  
Learning the ways of being in the organisation

# Origins of our work: *how* people learn at work

- Learning by doing – 69%
- Learning by discussing with others - 31%
- Coaching and mentoring – 24%
- Learning by teaching others – 21%
- Vicarious learning – 21%
- Learning by trial and error – 17%
- Self-study (eg reading literature) – 14%

# Origins of our work: *who* people learn with

- Team members – 66%
- Line Manager – 52%
- Colleagues elsewhere in organisation – 45%
- Mentor – 35%
- Coach - 21%
- Senior leaders – 7%
- HR (competence advisors, consultants) – 7%



You



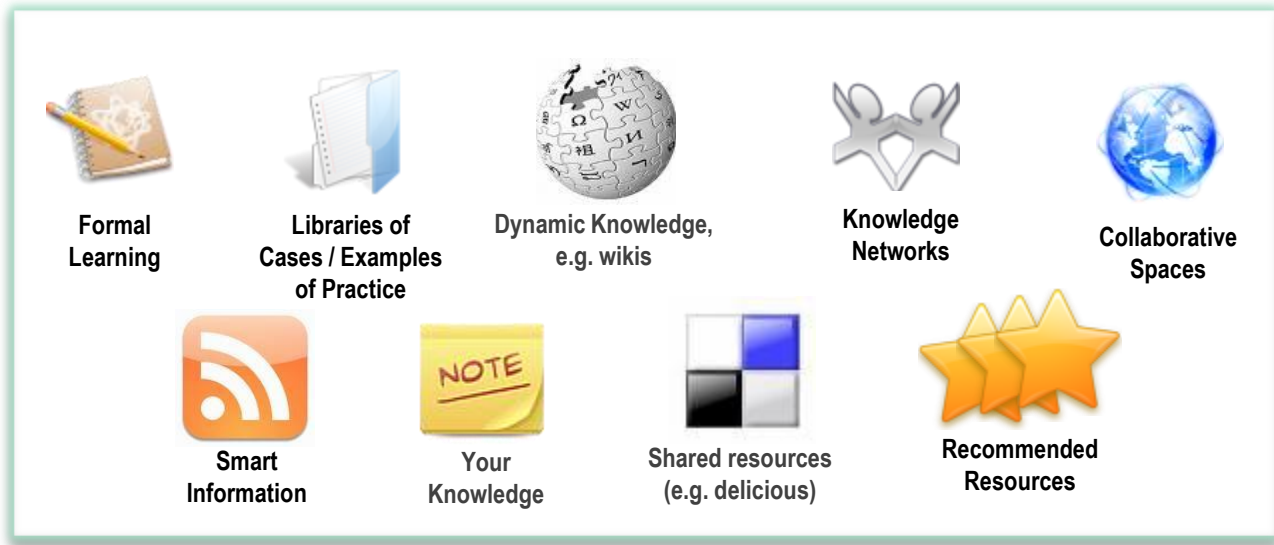
Your goal



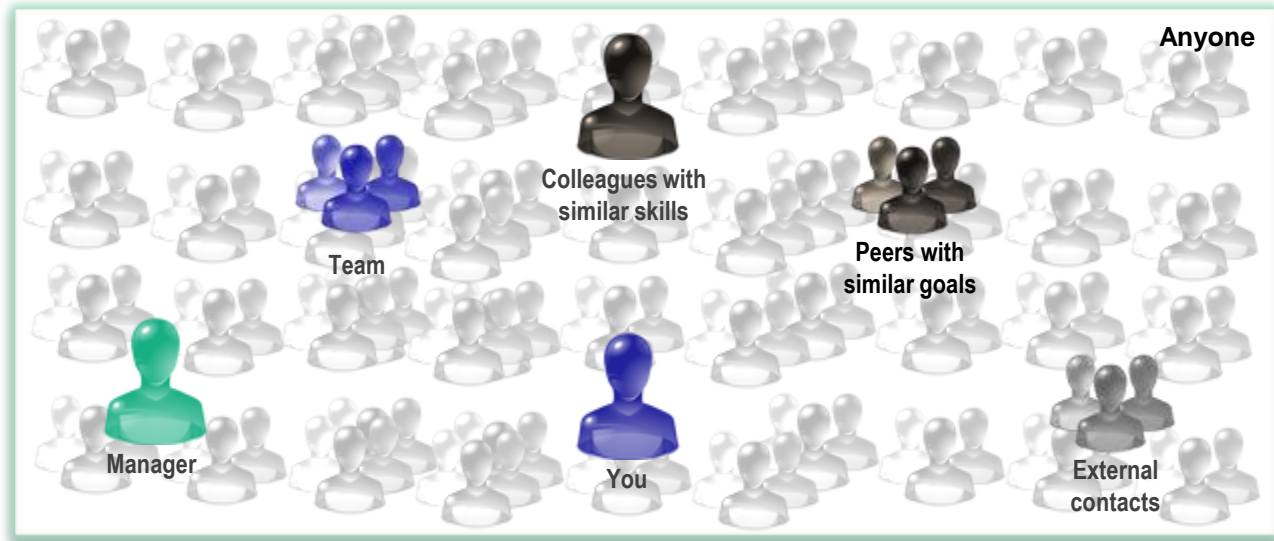
You



Your goal

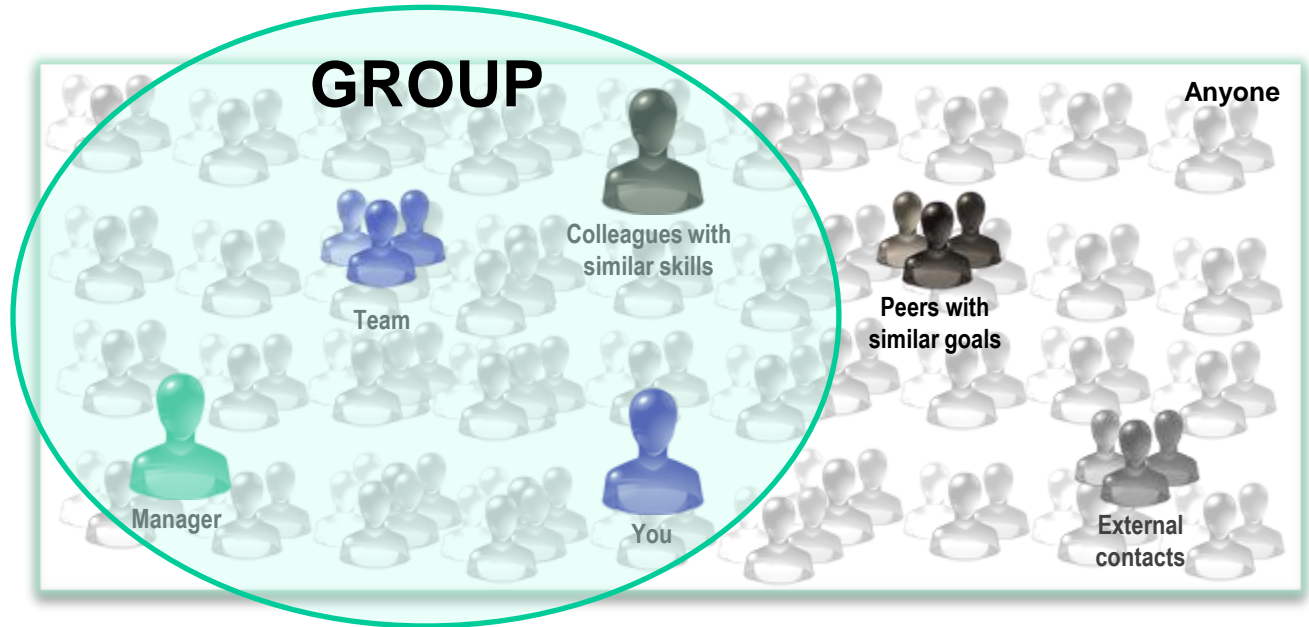






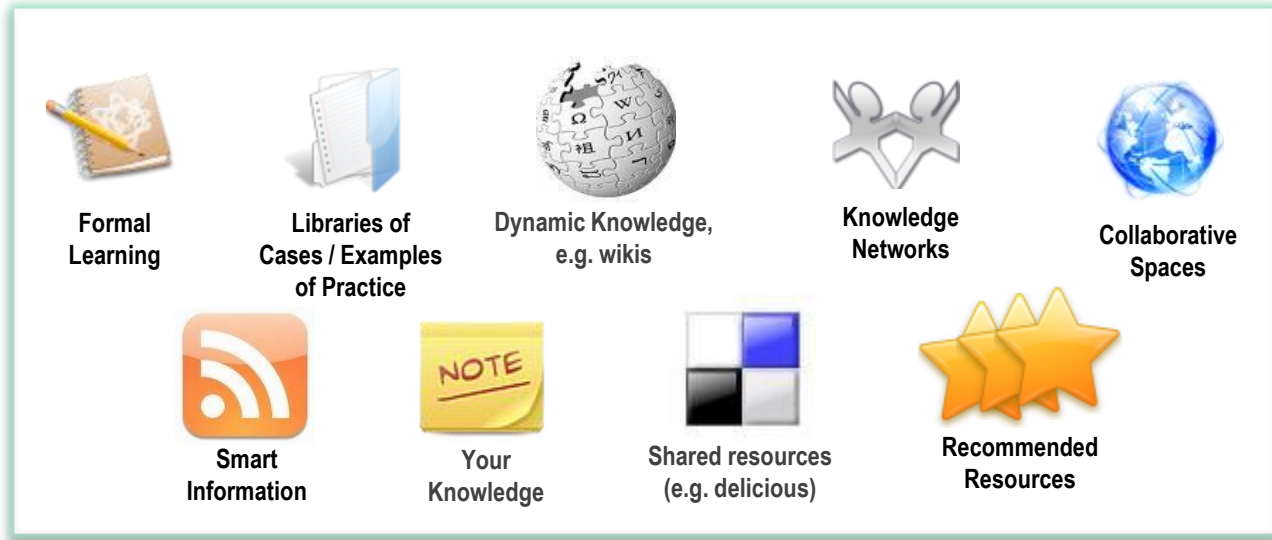
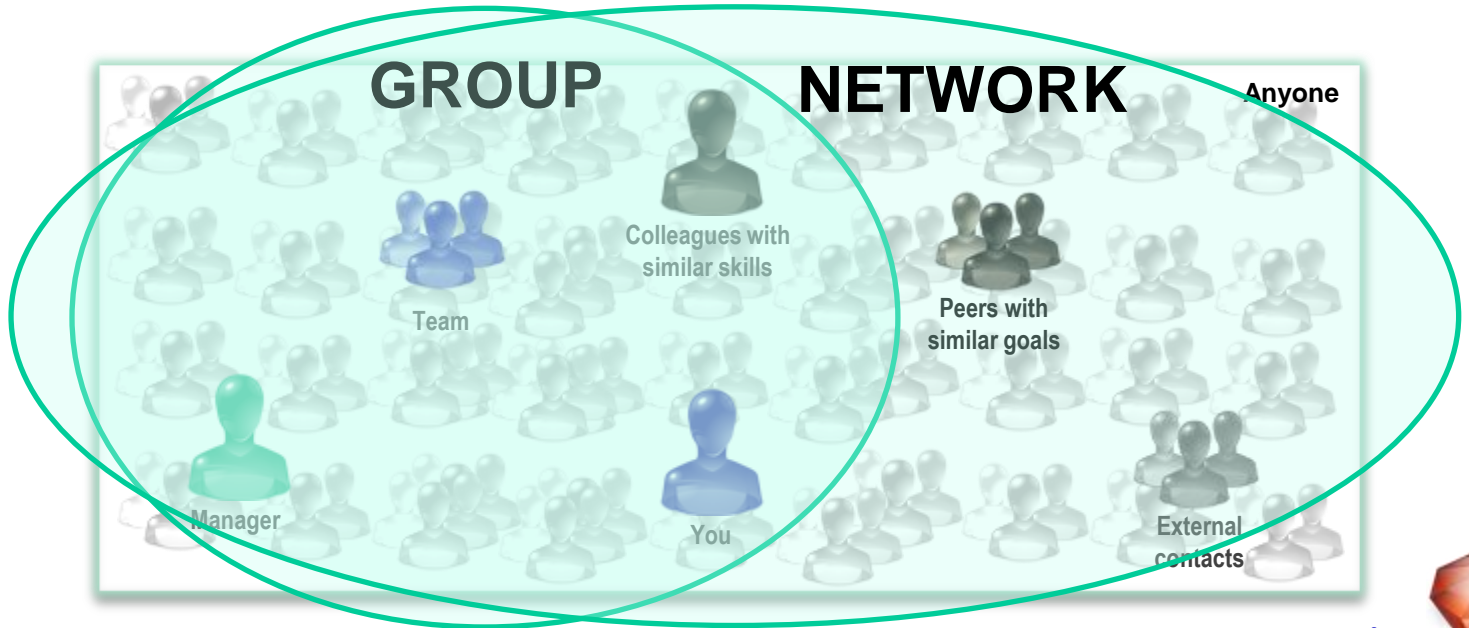
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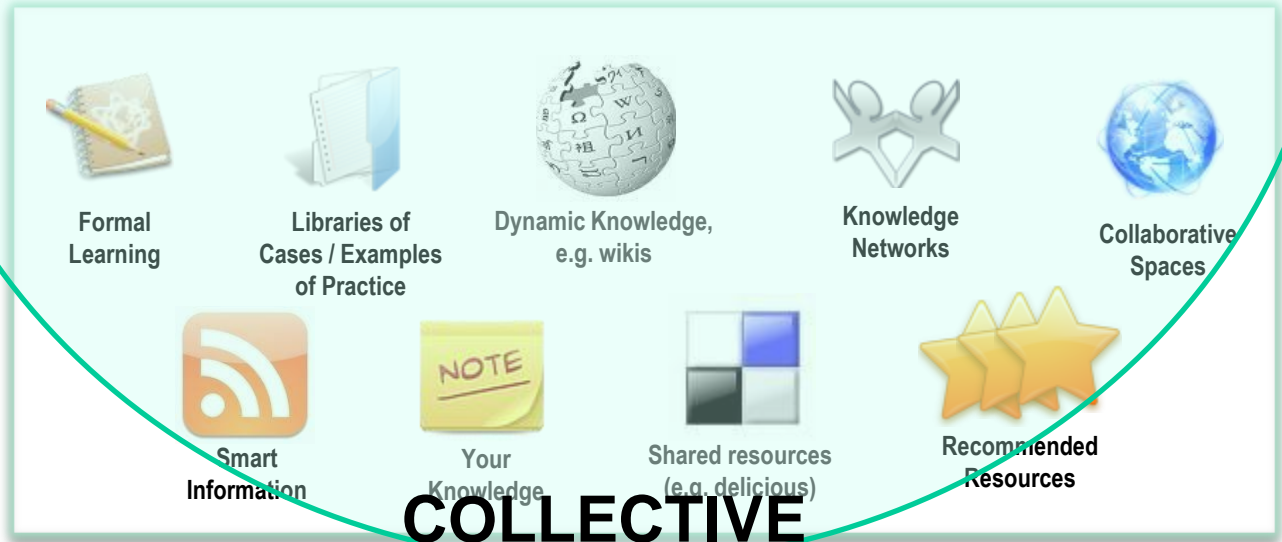
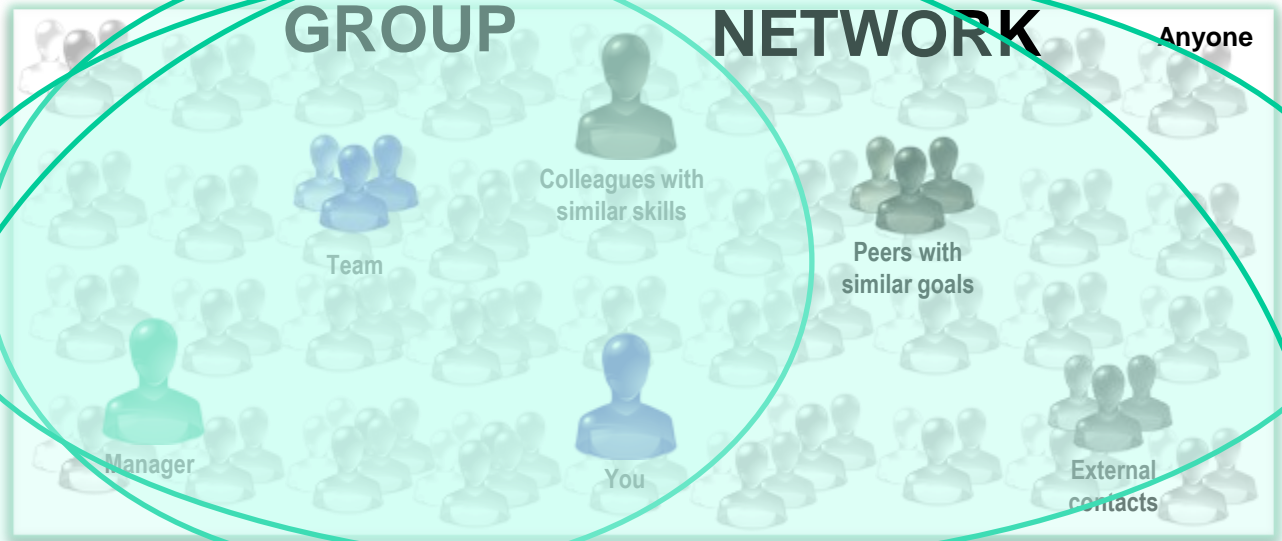




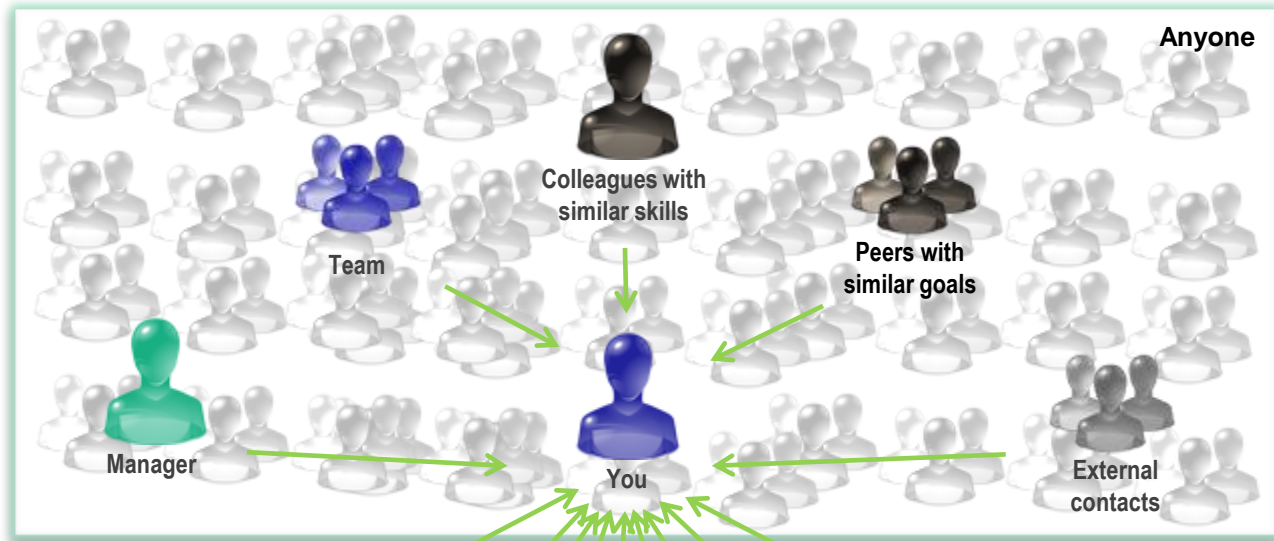
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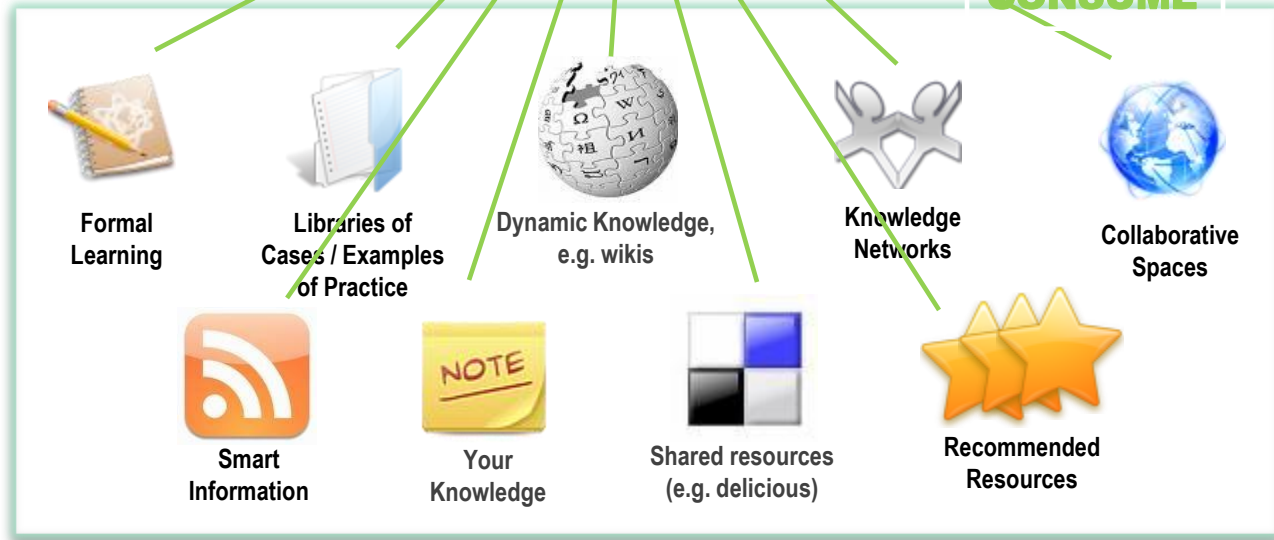


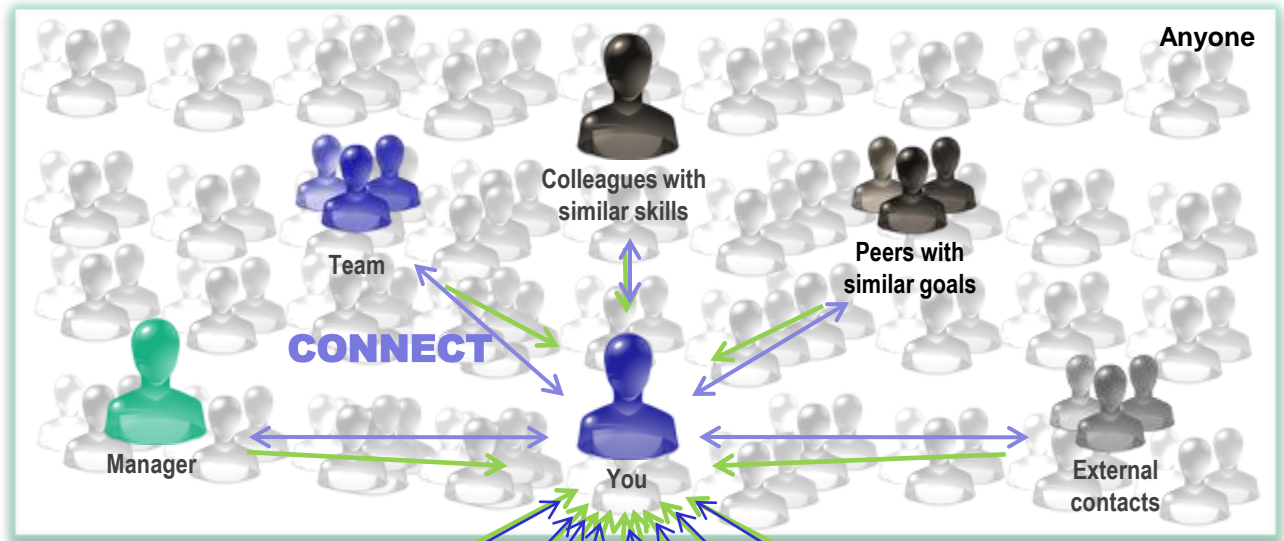


Your goal

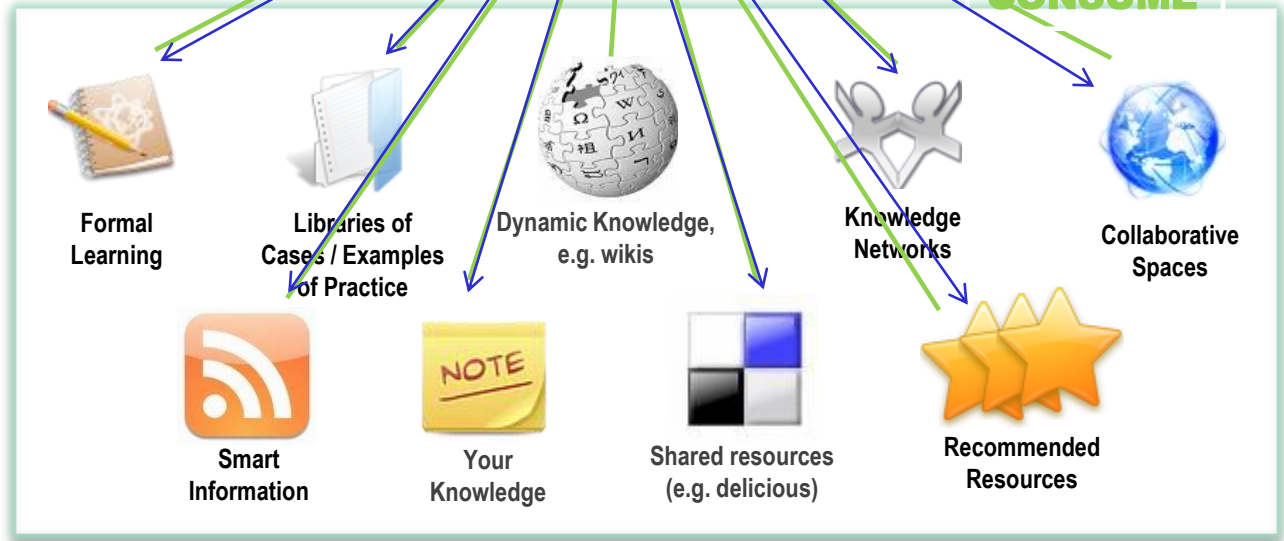


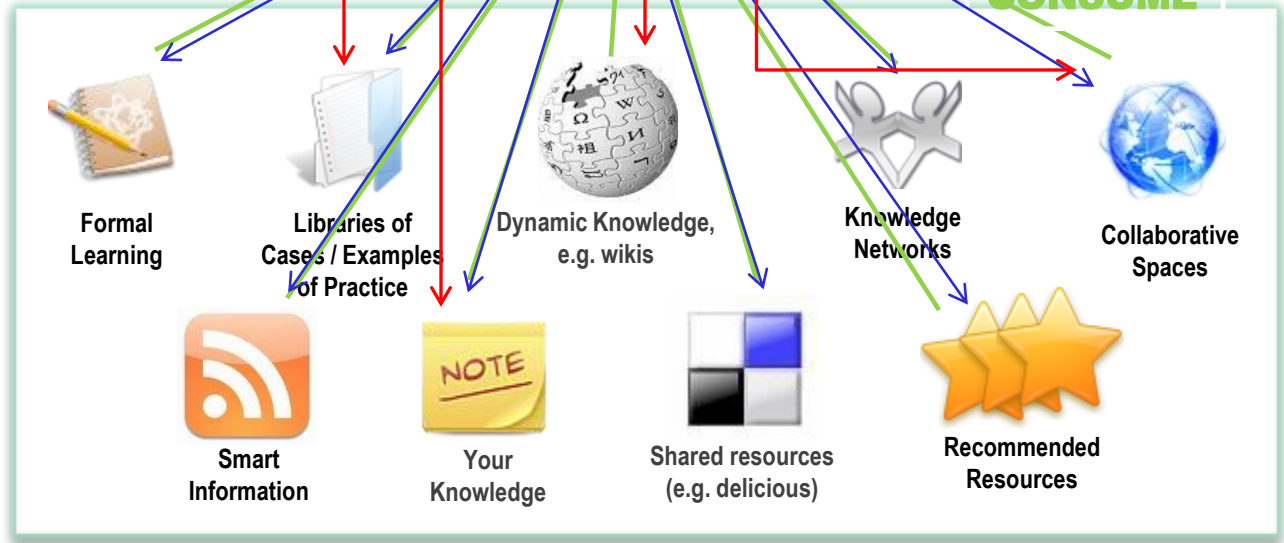
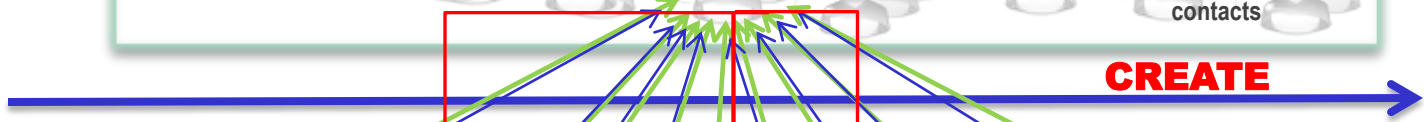
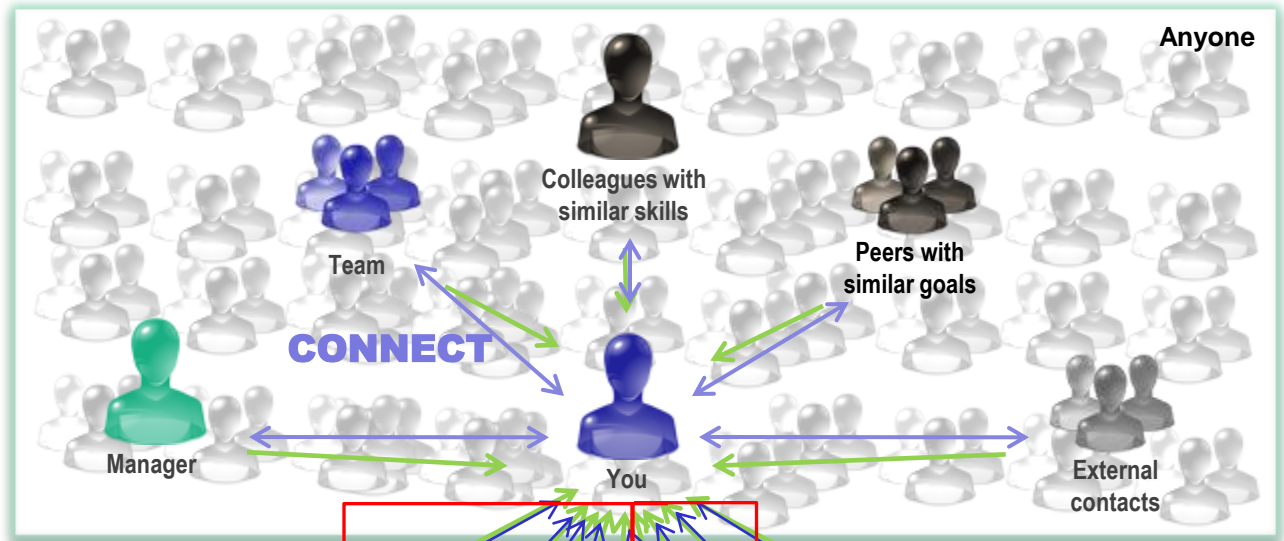
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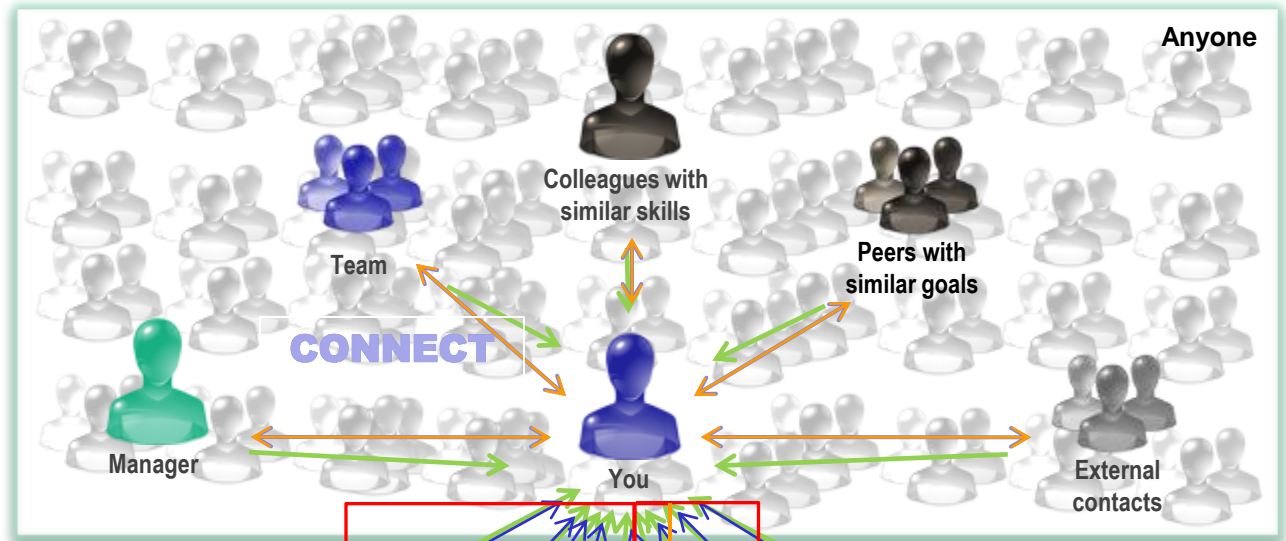


Your goal





Your goal



You

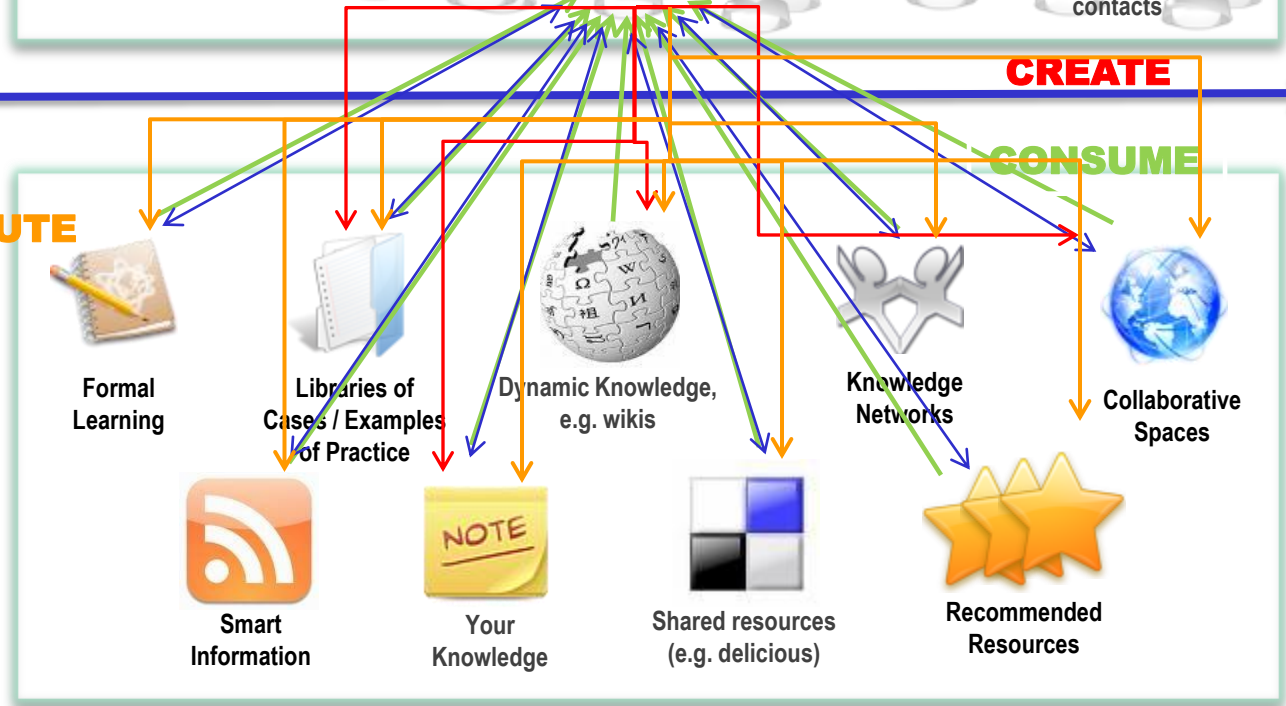


Your goal

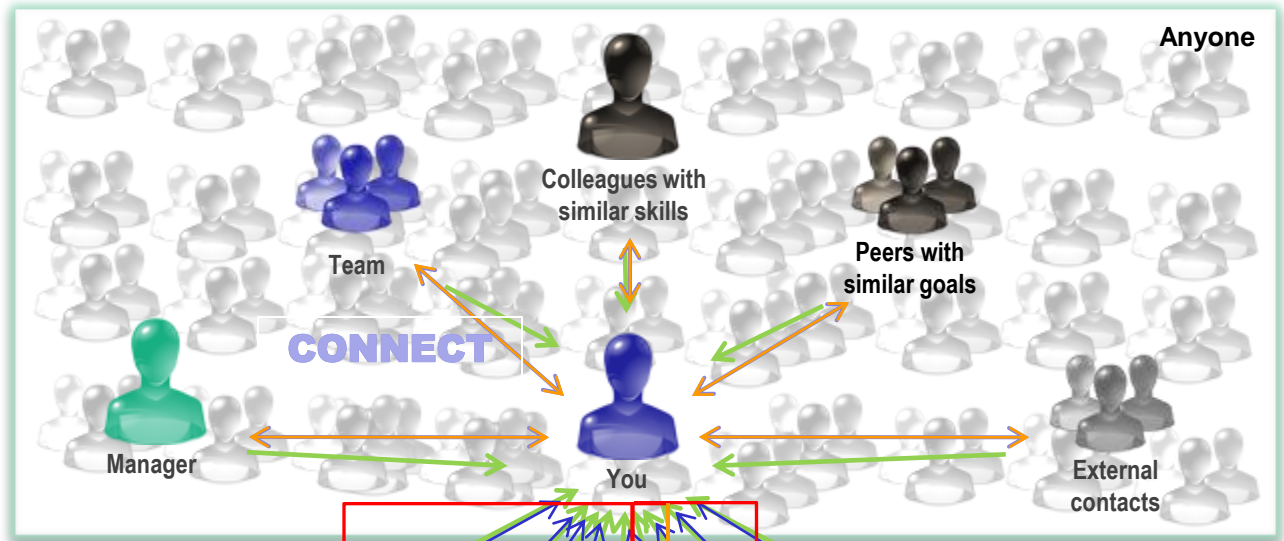
**CONTRIBUTE**

**CREATE**

**CONSUME**

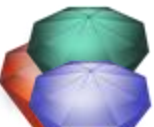
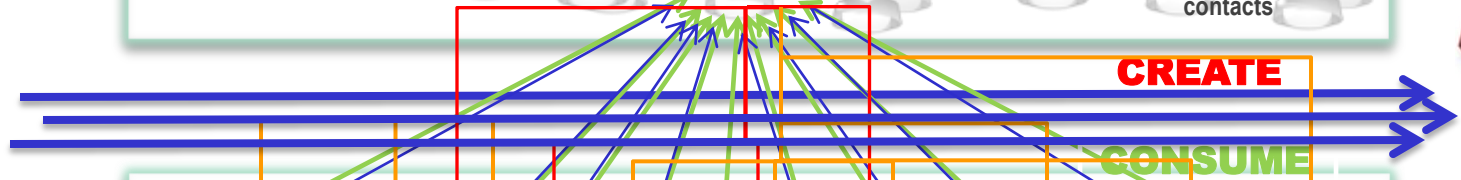




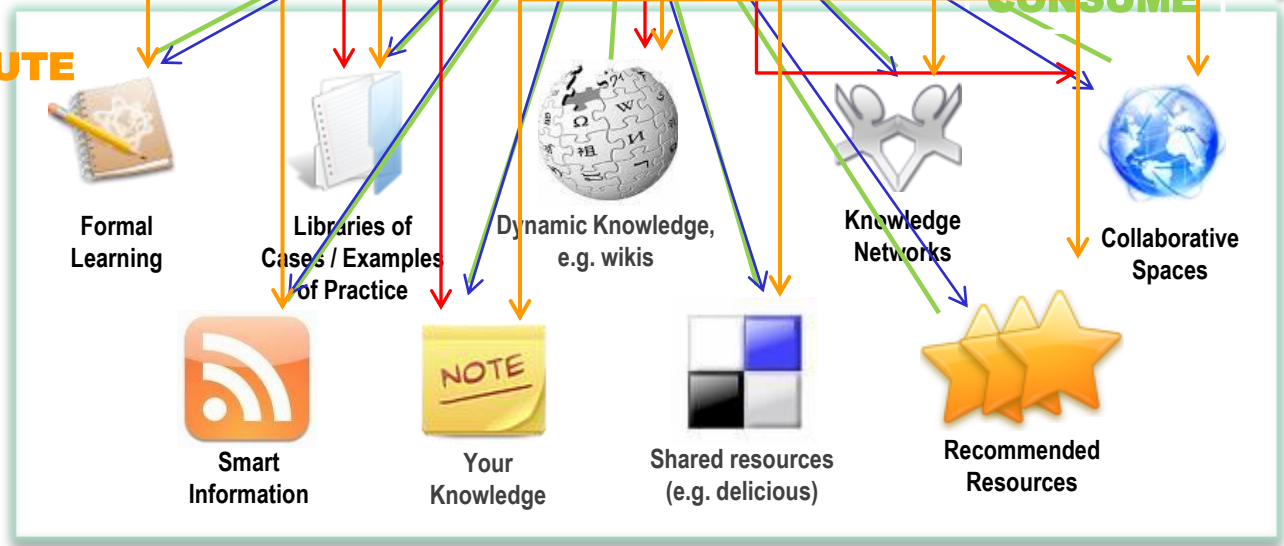


You and Your Peers

**CONTRIBUTE**



Your goals



# Charting tools: searching through goals or resources

## **Charting**

### **My Goals**

[cloud storage](#)

[business case \[-\]](#)

[cloud storage market](#)

[analysis \[-\]](#)

[cloud storage user](#)

[trials \[-\]](#)

[Inbox](#)

[All goals](#)

[All my goals](#)

Hello [amywilson](#).

[logout](#) | [edit profile](#)

[notes](#)

[people](#)

[sources](#)

Results for: data

### **Goals**

### **Notes**

- [Cloud computing and cloud data storage have been heavily hyped as attractive alternatives to in-house](#)
- [Data center managers are now moving full speed to virtualize everything and adopt the cloud model, wh](#)
- [The Storage Cloud is/will be the amorphous entity of online data that will be uploaded from a variety](#)
- [A storage area network \(SAN\) is an architecture to attach remote computer data storage devices \(such](#)
- [Network-attached storage \(NAS\) is file-level computer data storage connected to a computer network pr](#)
- [Network-attached storage devices let you share your data amongst multiple PCs, local and remote.](#)

### **Sources**

# Charting tools: adopting another person's goal

## Charting

### My Goals

[cloud storage](#)

[business case](#) [-]

[cloud storage market](#)

[analysis](#) [-]

[cloud storage user](#)

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Hello [amywilson](#).

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[notes](#)

[people](#)

[sources](#)

## SAN Devices notes

Note	Source	Creator	Goals
A storage area network (SAN) is an architecture to attach remote computer data storage devices (such as disk arrays, tape libraries, and opti...	<a href="#">Storage area network - Wikipedia, the free encyclopedia</a>	fionajames	<a href="#">SAN Devices</a>

[Adopt this goal](#)

# Charting tools: adding notes to a goal

## Charting

### My Goals

[cloud storage business case \[-\]](#)

[cloud storage market analysis \[-\]](#)

[cloud storage user trials \[-\]](#)

[Inbox](#)

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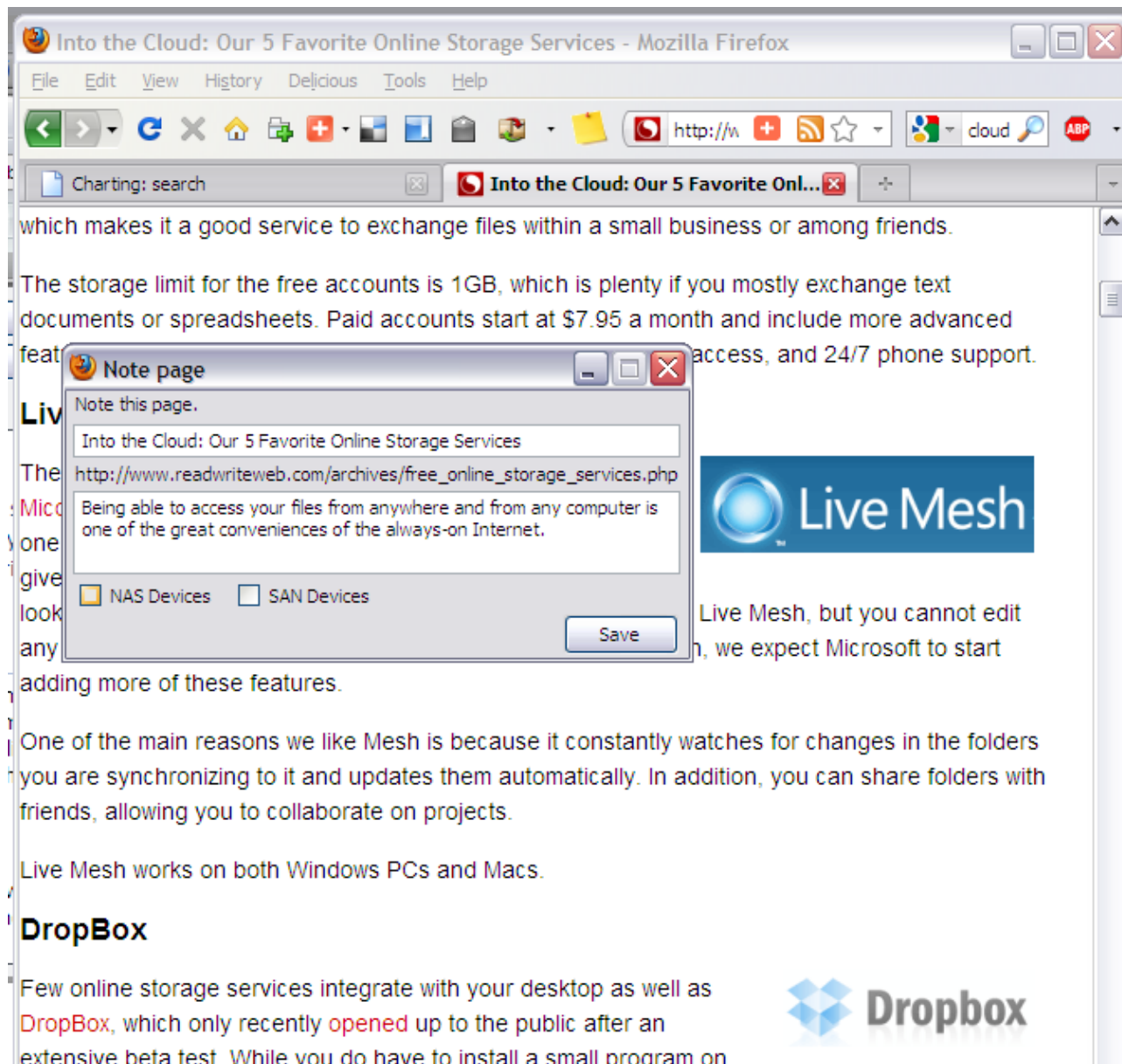
[people](#)

[sources](#)

## cloud storage business case notes

Note	Source	Creator	Goals	
IBM Putting Web2.0 Technology to Work Seminar lets you to explore the IBM Web 2.0 goes to work initiative and see how the three pillars of ec...	<a href="#">IBM e-business - IBM Putting Web2.0 Technology to Work Seminar - China (Hong Kong S.A.R.)</a>	amywilson	<div><a href="#">cloud storage business case</a> ▲ <a href="#">cloud storage market analysis</a> <a href="#">cloud storage user trials</a> ▼ save</div>	<a href="#">Remove</a>
Foe years, the Web has been encumbered by the document metaphor. It leads people to think of the Web as a network of documents. It ignores th...	<a href="#">The Private Cloud: Why it Now Makes More Sense - ReadWriteCloud</a>	amywilson	<div><a href="#">cloud storage business case</a> ▲ <a href="#">cloud storage market analysis</a> <a href="#">cloud storage user trials</a> ▼ save</div>	<a href="#">Remove</a>

# Charting tools: making notes



The screenshot shows a Mozilla Firefox browser window with the title "Into the Cloud: Our 5 Favorite Online Storage Services". The address bar shows the URL "http://www.readwriteweb.com/archives/free\_online\_storage\_services.php". The page content includes text about online storage services, a "Live Mesh" logo, and a "Dropbox" logo. A "Note page" dialog box is open in the foreground, containing the following text:

Note this page.  
Into the Cloud: Our 5 Favorite Online Storage Services  
[http://www.readwriteweb.com/archives/free\\_online\\_storage\\_services.php](http://www.readwriteweb.com/archives/free_online_storage_services.php)  
Being able to access your files from anywhere and from any computer is one of the great conveniences of the always-on Internet.

NAS Devices  SAN Devices

Save

The storage limit for the free accounts is 1GB, which is plenty if you mostly exchange text documents or spreadsheets. Paid accounts start at \$7.95 a month and include more advanced features, such as mobile access, and 24/7 phone support.

Live Mesh, but you cannot edit files. Instead, we expect Microsoft to start adding more of these features.

One of the main reasons we like Mesh is because it constantly watches for changes in the folders you are synchronizing to it and updates them automatically. In addition, you can share folders with friends, allowing you to collaborate on projects.

Live Mesh works on both Windows PCs and Macs.

**DropBox**

Few online storage services integrate with your desktop as well as DropBox, which only recently opened up to the public after an extensive beta test. While you do have to install a small program on

# Charting tools: viewing people attached to a goal

## Charting

### My Goals

[cloud storage business case](#) [-]

[cloud storage market analysis](#) [-]

[cloud storage user trials](#) [-]

[Inbox](#)

[All goals](#)

[All my goals](#)

Hello [amywilson](#).

[logout](#) | [edit profile](#)

[notes](#)

[people](#)

[sources](#)

## cloud storage user trials people

Name	Position	Bio	Goals
<a href="#">amywilson</a>	Manager		<a href="#">cloud storage business case</a>   <a href="#">cloud storage market analysis</a>   <a href="#">cloud storage user trials</a>
<a href="#">bryanclegg</a>	novice engineer		<a href="#">cloud storage user trials</a>   <a href="#">cloud storage roadmap</a>
<a href="#">davidmunro</a>	marketing		<a href="#">cloud storage market analysis</a>   <a href="#">cloud storage user trials</a>
<a href="#">ellenpaige</a>	subjectmatterexpert		<a href="#">cloud storage futures</a>   <a href="#">cloud storage market analysis</a>   <a href="#">cloud storage v0.5 user spec</a>   <a href="#">cloud storage user trials</a>

# Charting tools

## **Unique aspects of charting tools**

- Learning goal as social object
- Liteweight
- Linked to users current tools
- Shared with others
- Aiming towards visualisation of knowledge structures - similar to swirl

# Charting tools

image-swirl.googlelabs.com/html?q=books#481

Google image swirl labs books Search Images Help

The visualization shows a central text snippet surrounded by various images and text snippets. The central text snippet is highlighted by a blue circle. The images include book covers, stacks of books, and library interiors. The text snippets are connected to the central text snippet by blue lines, indicating their relationship to the search term 'books'.



# Challenge

Issues related to the role resources play in constructivist-oriented learning processes, both formal and informal.



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# The power of the collective

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