The Knowledge Facebook: Insourcing vs. Outsourcing

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Agenda

- Collaboration models for innovation
- Web 2.0 & Cloud Computing tools
- Techniques for generating the "Knowledge Facebook"

Definition of Open Innovation

Open innovation: "Open innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively. [This paradigm] assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as they look to advance their technology."

Henry Chesbrough

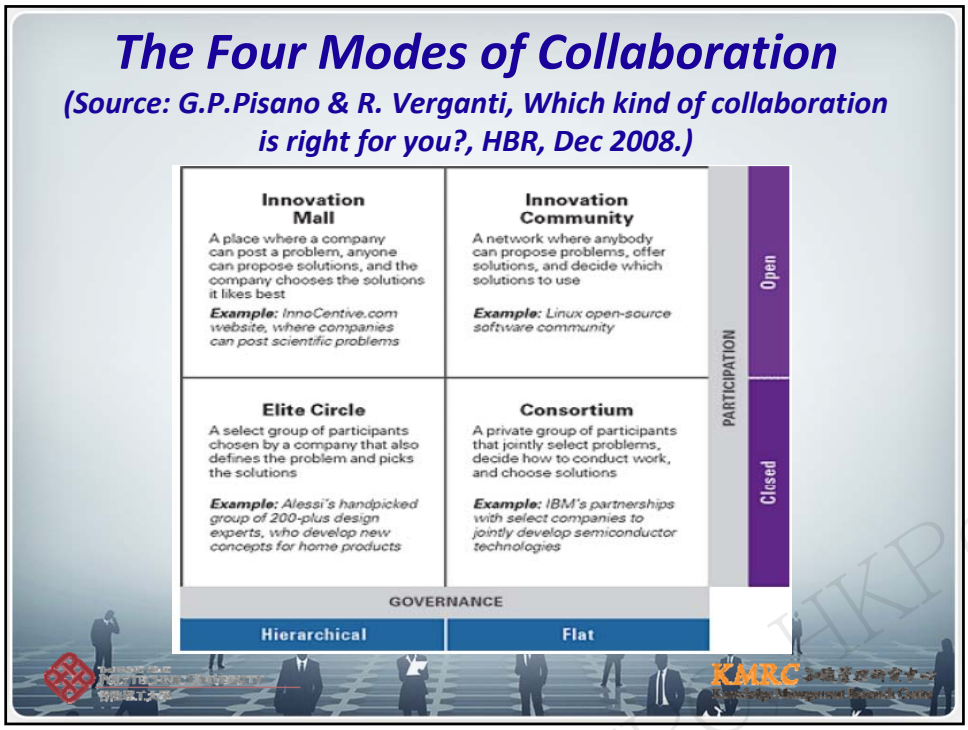
Elements of a collaborative architecture

(Source: G.P.Pisano & R. Verganti, Which kind of collaboration is right for you?, HBR, Dec 2008.)

- **Open Vs Closed**
- **Governance (Hierarchical Vs Flat)**

which in turns depend on

1. **How well the problem is known/defined?**
2. **Trivial or hard problem**
3. **Whether the problem can be decomposed?**
4. **Abundance of the expertise**
5. **A firm's capabilities (breadth Vs depth), resources (to review, select, decide), and assets**
6. **Accessibility of the platform for collaboration**
7. **Whether the best solution is needed or an average solution is good enough?**



Seven principles of Web 2.0

1. The Web as a Platform
2. Services beyond a single (type of) device
3. Lightweight product (development) & business models
4. Rich User Experiences
5. Harnessing Collective Intelligence
6. Data is the competitive advantage
7. Leveraging the Long Tail

(Source: "Web 2.0 University")

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Major applications of Web 2.0

Blogs
- Marketing, Product Development, Project communications, Corporate Communications, Entertainment (e.g. MS Xbox 360), E-Learning, professional services, E-Mail & DMS substitute

Podcasts
- E-Learning, Tourism, Media, Public Relations, Marketing

Wikis
- Sharing of practice tips, building knowledge bases, Collaborative Authoring, Expert Directory, Community spaces, Project Management, E-Mail substitute

Mashups
- Customer distributions, crime rates, housing demand

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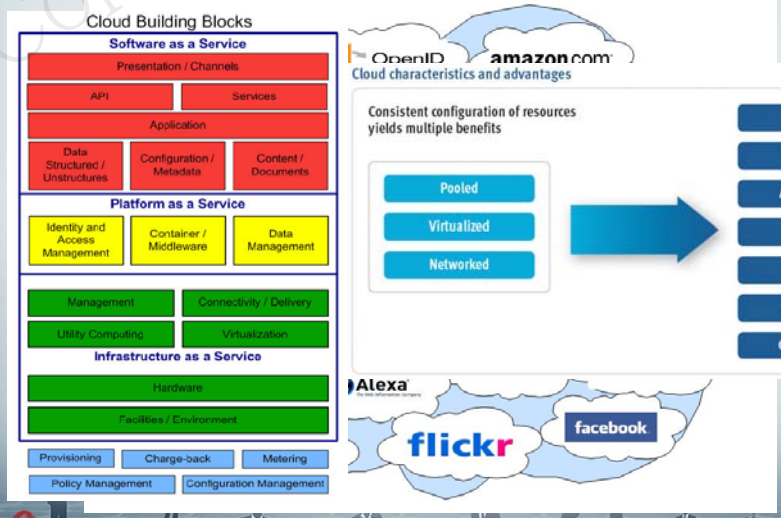
Definition of Cloud Computing

A widely adopted, formal definition comes from the National Institute of Standards and Technology:

"Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction."

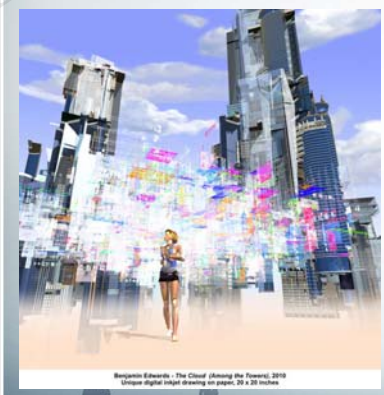
Cloud applications, building blocks (Oracle) & benefits (EMC)



Opportunities brought about by the cloud

Aiming beyond the primary set of benefits?

Cloud characteristics: Ubiquity, Scalability, Connectivity across platforms, Perpetual storage, Accessible by/to the masses



Secondary benefits

- Software & Upgrade management
- Spams and virus threats
- Value-add functions offered by a S-a-a-S provider
- Integrated data management
- …

Cloud Intelligence

(Sources: Nova Spivack, presenter at The Singularity Summit, 2010 & Tom Koulopoulos, author of Cloud eBook & presenter at ILA 2010)

1. Collective intelligence
   - Crowds -> Groups -> Meta-selves
2. Re-factoring

Cloud Intelligence expanded

- Mining for patterns and new knowledge embedded in very large structured and unstructured datasets
- Decompose a problem into smaller ones for parallel processing (aka Grid Computing)
- Allocate/Divert resources to meet a surge in demand
- (Re-)Prioritise tasks and resources for high gain areas/applications
- Elicit human input on a massive scale (aka Web 2.0+)
- …

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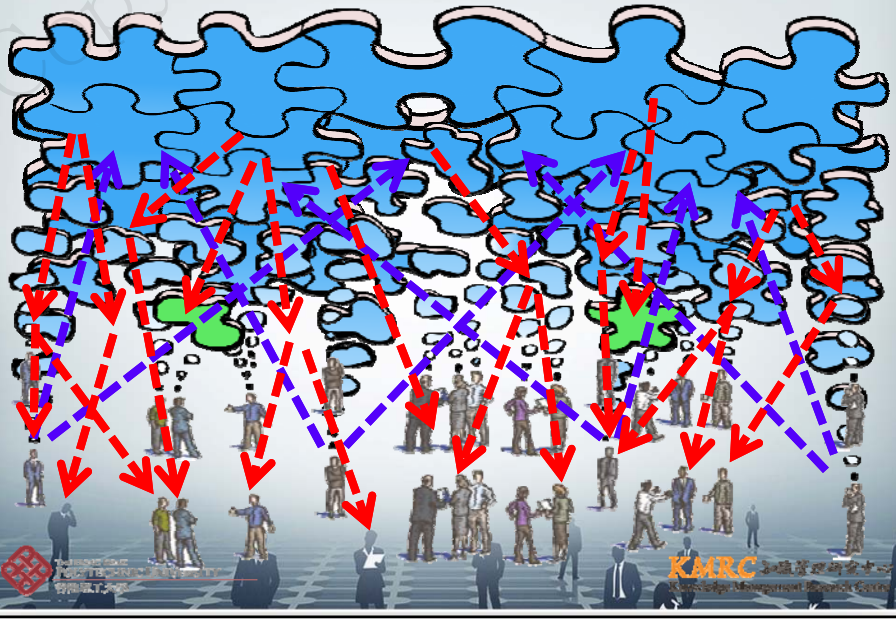
Cloud Intelligence in action



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Singapore's Smart Traffic Cloud (Source: FutureGov, Dec 2010)

SMART TRAFFIC CLOUD ROAD TESTED

Singapore is trialing a traffic management system that could improve the monitoring of the citystate's roads by using geo-location data captured from drivers' smart phones.

GPS sensors in drivers' smart phones can determine the location, direction of travel and speed of vehicles, and the data, captured in real-time, is hosted on a cloud platform that the Land Transport Authority can use to monitor – and predict – traffic conditions.

"It would be very costly to deploy sensors all over the city. We only have sensors on highways and major roads, so why not make use of GPS sensors in drivers' mobile handsets?" said Dr Lim Hock Beng, Programme Director, Intelligent Systems Centre, Nanyang Technological University, who leads the research team behind the initiative.

The smart traffic cloud platform, a joint effort by LTA, NTU, the Infocomm Development Authority and SingTel, will be available for government and private sector service providers to use the data to develop location-based services.

Singapore has been working in collaboration with the University of Berkley, which is testing the same concept in the San Francisco Bay area.

ASIA PACIFIC futureGOV

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Amazon Mechanical Turk

Human Intelligence Tasks

amazonmechanical turk
Artificial Artificial Intelligence

Your Account | HITs | Qualifications

Already have an account? Sign in as a Worker | Requester

Introduction | Dashboard | Status | Account Settings

Mechanical Turk is a marketplace for work.
We give businesses and developers access to an on-demand, scalable workforce.
Workers select from thousands of tasks and work whenever it's convenient.
74,997 HITs available. View them now.

Make Money
by working on HITs

HITs - *Human Intelligence Tasks* - are individual tasks that you work on. Find HITs now.

As a Mechanical Turk Worker you:

- Can work from home
- Choose your own work hours
- Get paid for doing good work

Find an interesting task → Work → Earn money

Find HITs Now

or learn more about being a Worker

Get Results
from Mechanical Turk Workers

Ask workers to complete HITs - *Human Intelligence Tasks* - and get results using Mechanical Turk. Register Now

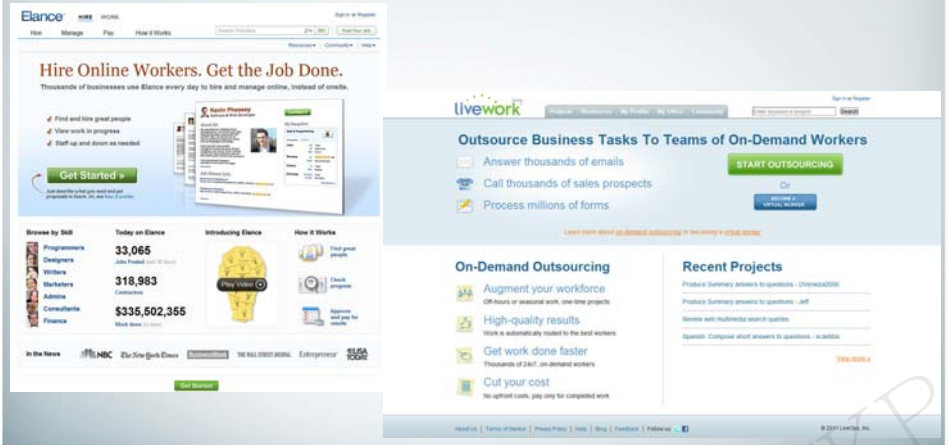
As a Mechanical Turk Requester you:

- Have access to a global, on-demand, 24 x 7 workforce
- Get thousands of HITs completed in minutes
- Pay only when you're satisfied with the results

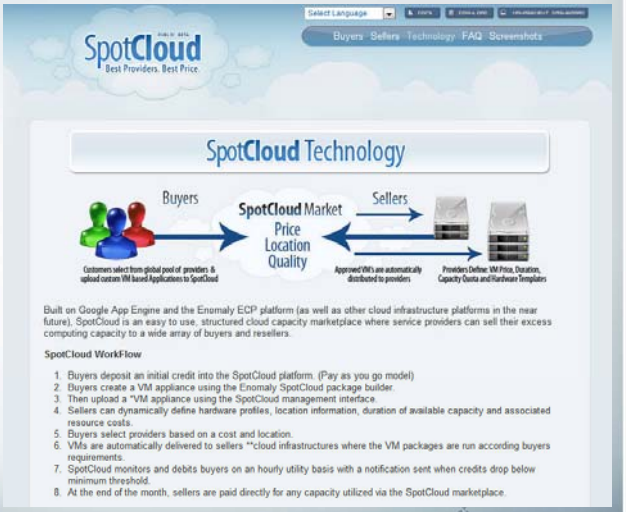
Fund your account → Load your tasks → Get results

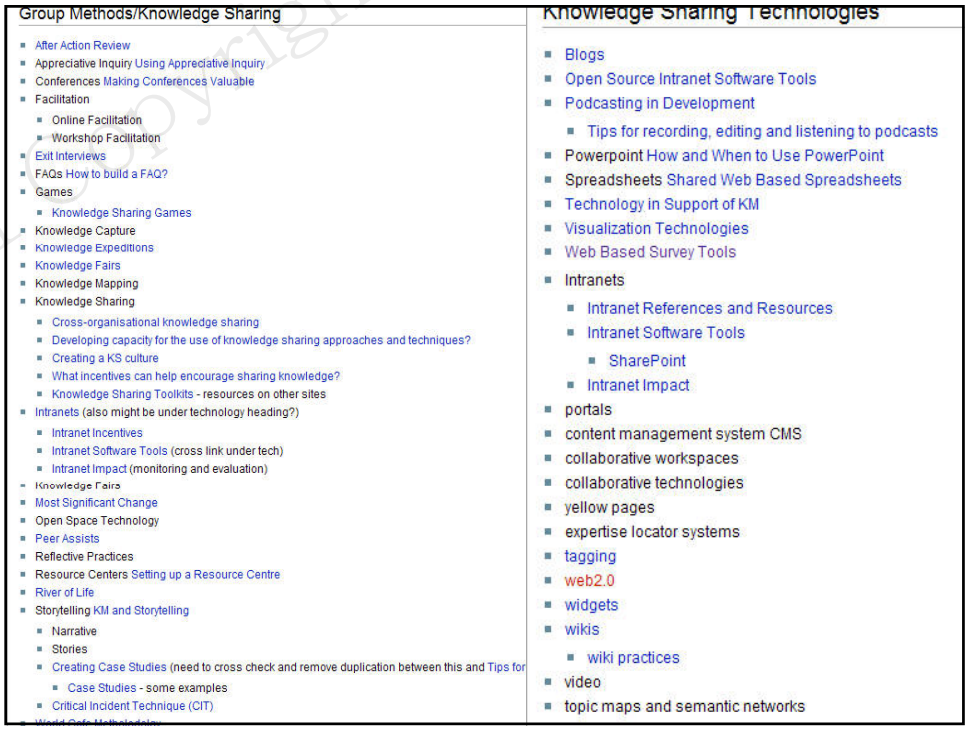
Get Started

Task decomposition: Elance & Livework



Cloud Marketplace: SpotCloud





Group Methods/Knowledge Sharing

- After Action Review
- Appreciative Inquiry Using Appreciative Inquiry
- Conferences Making Conferences Valuable
- Facilitation
  - Online Facilitation
  - Workshop Facilitation
- Exit Interviews
- FAQs How to build a FAQ?
- Games
  - Knowledge Sharing Games
- Knowledge Capture
- Knowledge Expeditions
- Knowledge Fairs
- Knowledge Mapping
- Knowledge Sharing
  - Cross-organisational knowledge sharing
  - Developing capacity for the use of knowledge sharing approaches and techniques?
  - Creating a KS culture
  - What incentives can help encourage sharing knowledge?
  - Knowledge Sharing Toolkits - resources on other sites
- Intranets (also might be under technology heading?)
  - Intranet Incentives
  - Intranet Software Tools (cross link under tech)
  - Intranet Impact (monitoring and evaluation)
- Knowledge Fairs
- Most Significant Change
- Open Space Technology
- Peer Assists
- Reflective Practices
- Resource Centers Setting up a Resource Centre
- River of Life
- Storytelling KM and Storytelling
  - Narrative
  - Stories
  - Creating Case Studies (need to cross check and remove duplication between this and Tips for
    - Case Studies - some examples
  - Critical Incident Technique (CIT)
- World Cafe Methodology

Knowledge Sharing Technologies

- Blogs
- Open Source Intranet Software Tools
- Podcasting in Development
  - Tips for recording, editing and listening to podcasts
- Powerpoint How and When to Use PowerPoint
- Spreadsheets Shared Web Based Spreadsheets
- Technology in Support of KM
- Visualization Technologies
- Web Based Survey Tools
- Intranets
  - Intranet References and Resources
  - Intranet Software Tools
    - SharePoint
  - Intranet Impact
- portals
- content management system CMS
- collaborative workspaces
- collaborative technologies
- yellow pages
- expertise locator systems
- tagging
- web2.0
- widgets
- wikis
  - wiki practices
- video
- topic maps and semantic networks

Relevant KM techniques to assess self-capabilities, knowledge flows & knowledge assets

- **Social Network Analysis**
- **Knowledge Mapping**
- **Knowledge Audit**
- **Collaborative Culture Index (CCI)**
- **...**

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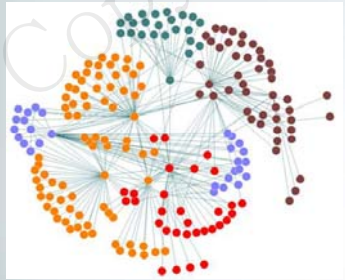
MyLinkedIn Connections analysed



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Common projects at early stage of a KM journey

For organizations which are *new* to KM

- **Awareness raising / Readiness Assessment**
- **Strategy Formulation / Strategic Planning**
- **Identify, rank and pilot of KM initiatives**
- **Knowledge Audit, Social Network Analysis**
- **EDMS, Search engine, portal deployment**
- **Taxonomy Creation and Maintenance**

Knowledge Management developments in Hong Kong: Lessons learnt from over 100 projects

Prof. Eric Tsui
Associate Director, Knowledge Management Research Centre
The Hong Kong Polytechnic University
&
Vice President, Hong Kong Knowledge Management Society

Replay seminar at
http://kmrc.ise.polyu.edu.hk/events_past.php