Zoom sur les systèmes et les technologies de l'information...

Quelques modèles mentaux
de management
et
aides à la décision…

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Jean-François DAVID
Stratégiste

IBM France 1967-1995
1992-95 Directeur R&D IBM Conseil

Depuis 1995: Consultant
Veille stratégique et organisationnelle
Enseignant à
Dauphine MIB, MBC, MCT,
HEC/**MBA & eMBA**, ESCP, Collège de l 'X, , MBA Varsovie, ….
Business models, Marketing planning, IT Governance, OM, Consulting,…
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Zoom sur les systèmes et les technologies de l'information...

On parlera ici des impacts

sur l'entreprise et le management

et non des aspects grands publics

(largement déjà évoqués par le professeur Roux...)

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Harvard Business Review

May 2003

IT Doesn't Matter

by Nicholas G. Carr

As information technology's power and ubiquity have grown, its strategic importance has diminished. The way you approach IT investment and management will need to change dramatically.

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vendors or partners, security breaches, even terrorism—and some have become magnified as companies have moved from tightly controlled, proprietary systems to open, shared ones. Today, an IT disruption can paralyze a company's ability to make its products, deliver its services, and connect with its customers, not to mention foul its reputation. Yet few companies have done a thorough job of identifying and tempering their vulnerabilities. Worrying about what might go wrong may not be as glamorous a job as speculating about the future, but it is a more essential job right now. (See the sidebar "New Rules for IT Management.")

In the long run, though, the greatest IT risk facing most companies is more prosaic than a catastrophe. It is, simply, overspending. IT may be a commodity, and its costs may fall rapidly enough to ensure that any new capabilities are quickly shared, but the very fact that it is entwined with so many business functions means that it will continue to consume a large portion of corporate spending. For most companies, just staying in business will require big outlays for IT. What's important—and this holds true for any commodity input—is to be able to separate essential investments

New Rules for IT Management

With the opportunities for gaining strategic advantage from information technology rapidly disappearing, many companies will want to take a hard look at how they invest in IT and manage their systems. As a starting point, here are three guidelines for the future:

Spend less. Studies show that the companies with the biggest IT investments rarely post the best financial results. As the commoditization of IT continues, the penalties for wasteful spending will only grow larger. It is getting much harder to achieve a competitive advantage through an IT investment, but it is getting much easier to put your business at a cost disadvantage.

Follow, don't lead. Moore's Law guarantees that the longer you wait to make an IT purchase, the more you'll get for your money. And waiting will decrease your risk of buying something technologically flawed or doomed to rapid obsolescence. In some cases, being on the cutting edge makes sense. But those cases are becoming rarer and rarer as IT capabilities become more homogenized.

Focus on vulnerabilities, not opportunities. It's unusual for a company to gain a competitive advantage through the distinctive use of a mature infrastructural technology, but even a brief disruption in the availability of the technology can be devastating. As corporations continue to cede control over their IT applications and networks to vendors and other third parties, the threats they face will proliferate. They need to prepare themselves for technical glitches, outages, and security breaches, shifting their attention from opportunities to vulnerabilities.

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LES PRINCIPAUX DEFIS SUR LES 5 PROCHAINES ANNEES

1. Développer les capacités organisationnelles de l'entreprise (temps de réponse et flexibilité, qualité totale, capacité d'innovation) (92%)

2. Gagner des parts de marché dans ses métiers de base et y rechercher leadership (90%)

3. Développer un compréhension détaillée des besoins des clients (87%)

4. Poursuivre le développement international (85%)

5. Lancer des programmes d'amélioration de la productivité et de réduction des frais généraux (83%)

6. Renforcer les compétences dans certaines fonctions critiques (technologie / industriel / marketing) et en assurer la mobilité entre centres de profits (81%)

7. Reconcevoir les principaux processus (reengineering) et transformer en profondeur l'organisation et le fonctionnement de l'entreprise (72%)

Etude BCG 1994

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THE US CEOs LOOK TO THE FUTURE
Foundation for the Malcolm Baldrige National Quality Award 1998

Six trends affecting major U.S. companies are judged to be "major" by more than 70% of the CEOs surveyed:

- globalization (94%)
- improving knowledge management (88%)
- cost and cycle time reduction (79%)
- improving supply chains globally (78%)
- manufacturing at multiple locations in many countries (76%)
- managing the use of more part-time, temporary and contract workers (71%)

Eight other trends were judged to be major by between 50% and 70% of the CEOs:

- developing new employee relationships based on performance (69%)
- improving human resources management (68%)
- improving the execution of strategic plans (68%)
- developing more appropriate strategic plans (64%)
- ongoing measurement and analysis of organizational processes (60%)
- developing a consistent global corporate culture (56%)
- outsourcing of manufacturing (55%)
- creating a learning organization (52%)

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and now…..

The top three challenges?

Not surprisingly, they are all related to competitiveness as measured by revenue growth. The Conference Board's annual survey for 2004 listed the top three challenges identified by CEOs worldwide as:

1. Sustained and steady top-line growth
2. Speed, flexibility, adaptability to change
3. Customer loyalty, retention

In the AT Kearney survey, only 28 percent of IT leaders ranked IT as a top 10 percent issue; only 37 percent of ALL the executives surveyed ranked IT as being this important.

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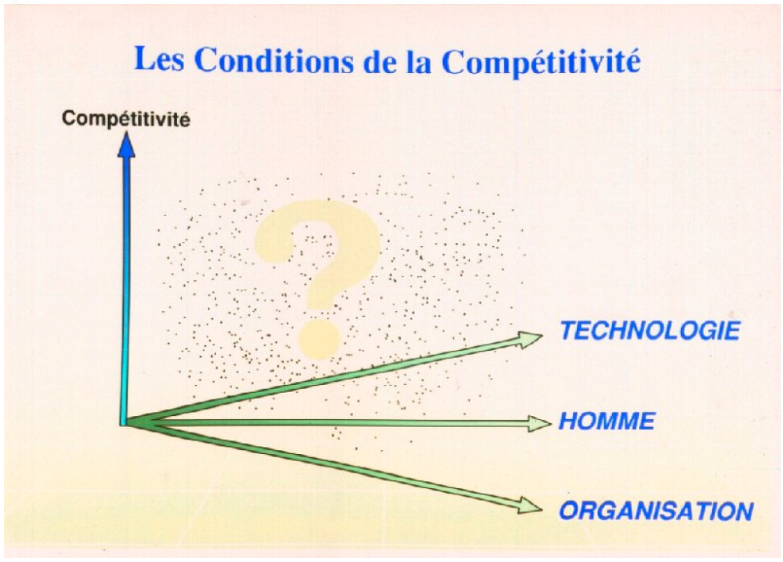
Les Conditions de la Compétitivité



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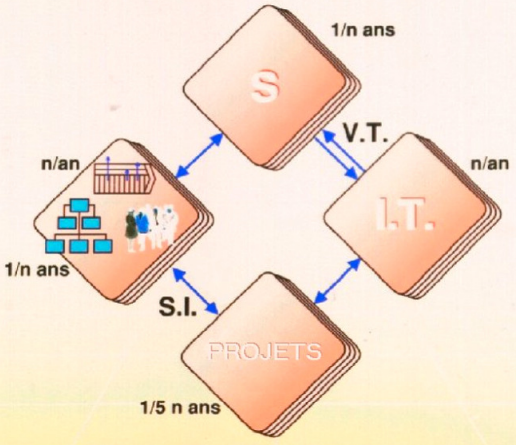
L'Alignement Dynamique



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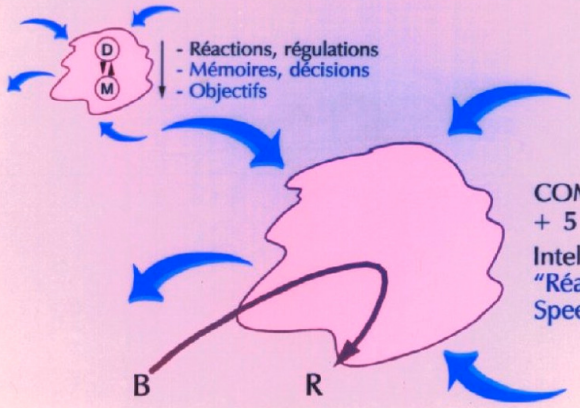
L'ENTREPRISE, UN SYSTEME VIVANT



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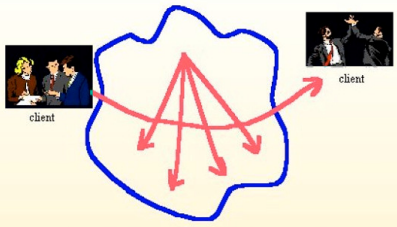
Structures,..... Processus,....



"Les organisations ne sont pas faites pour servir le client mais pour préserver l'ordre intérieur.
Pour le client, non seulement la structure interne ne lui est que peu d'utilité, mais de plus elle sert souvent de barrière.
L'organisation est verticale, le service au client est horizontal"

G.Fischer, CEO, Motorola

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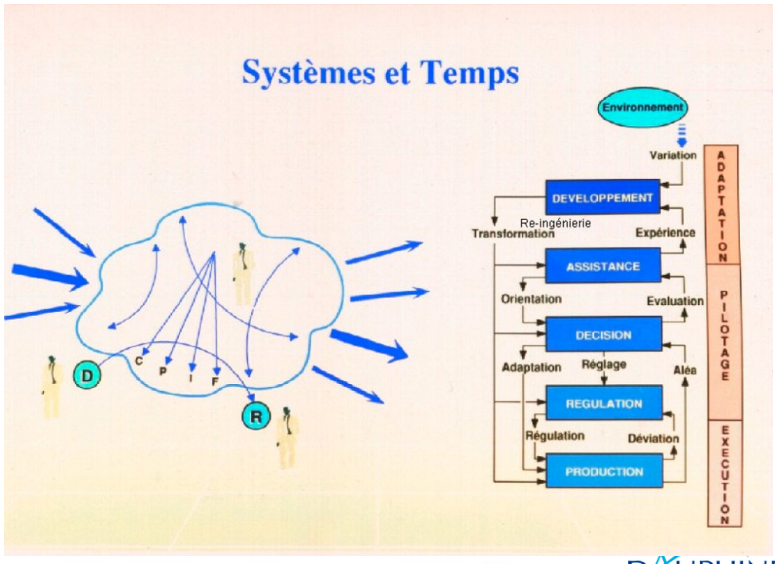

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The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information

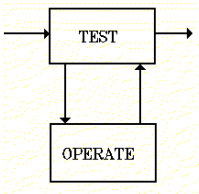
by George A. Miller

originally published in *The Psychological Review, 1956, vol. 63, pp. 81-97*

Information Processing Theory (G. Miller)

Overview:

George A. Miller has provided two theoretical ideas that are fundamental to cognitive psychology and the information processing framework.



The first concept is "chunking" and the capacity of short term memory. Miller (1956) presented the idea that short-term memory could only hold 5-9 chunks of information (seven plus or minus two) where a chunk is any meaningful unit. A chunk could refer to digits, words, chess positions, or people's faces. The concept of chunking and the limited capacity of short term memory became a basic element of all subsequent theories of memory.

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L'Opulence communicationnelle

MEDIA
+
MESSAGES

BESOINS
DESIRS

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80's

00's

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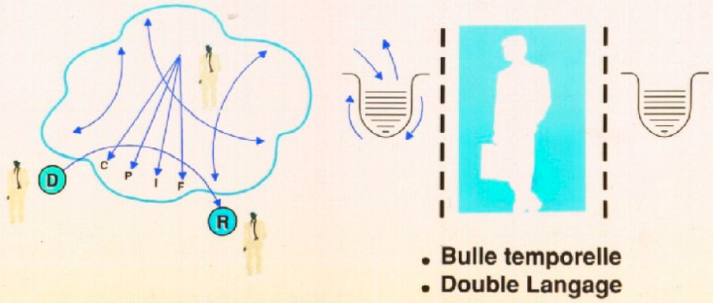
Le Temps de l'Acteur



- Bulle temporelle
- Double Langage
- Arbitrages
- Ergonomie généralisée

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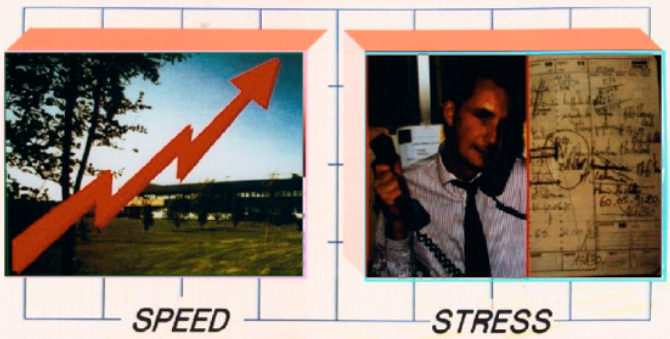
Le "speed" de l'entreprise et l'individu



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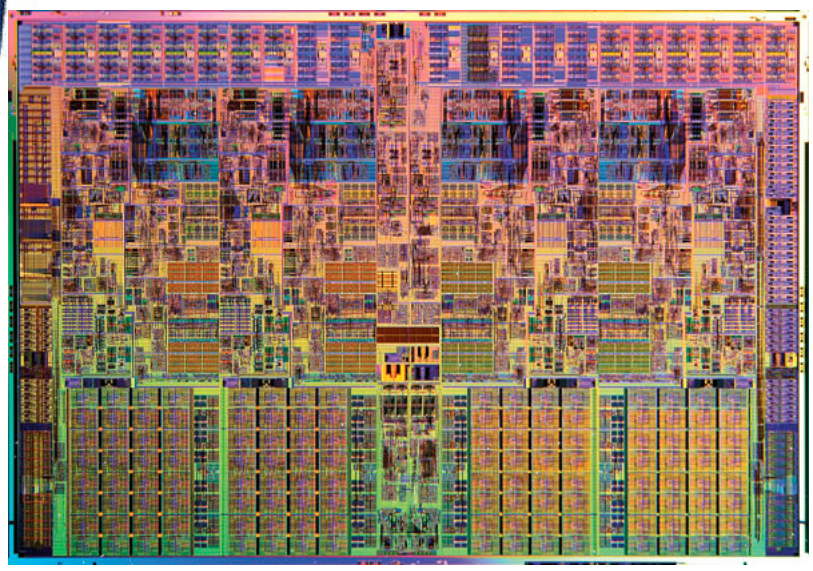

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Key technologies

Microprocessors

Storage

Communications

M/M interfaces

FAST & CONTINUOUS PROCESS

but unequal

Source: IBM France

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L'intox du e-

To e- or not to be...

e-economy
e-business
e-procurement
e-sourcing
e-customer care
e-commerce
e-payment
e-learning
e-turbulence
e-transformation
e-manager
e-volution
e-success
e-commitment
e-infrastructure
e-xcellence
e-cceleration

net 2001, l'odyssée de l'e-space

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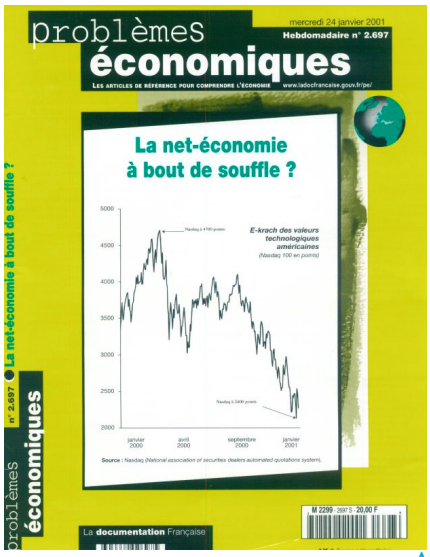

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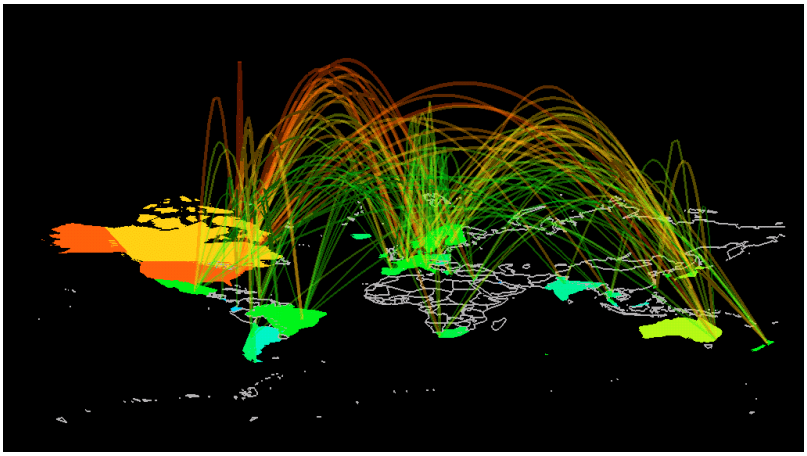

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Web 2.0, …

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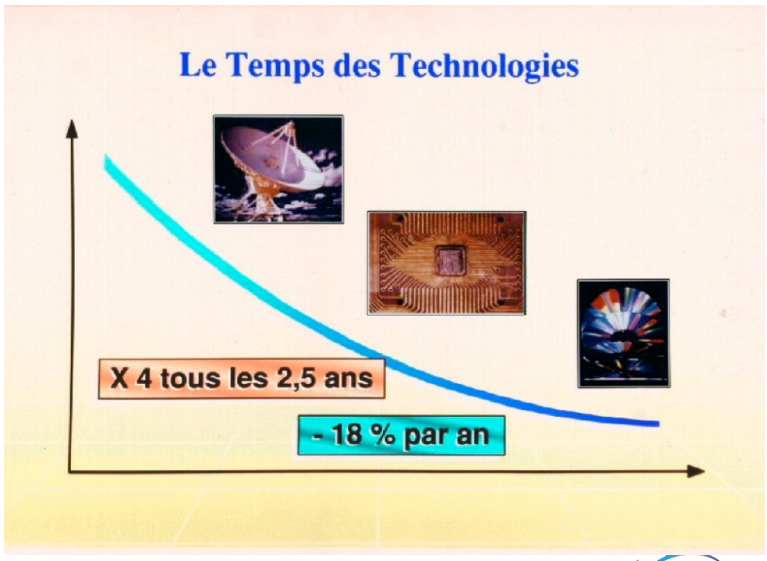

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Loi de Moore: 

*2 tous les 18 mois

Loi de Metcalfe: 

Valeur d'un réseau = ^nb d'utilisateurs

Loi de Guilder: 

Bande passante = *3 chaque année

Volume communications =*2 tous les 100 jours

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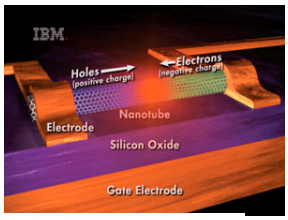
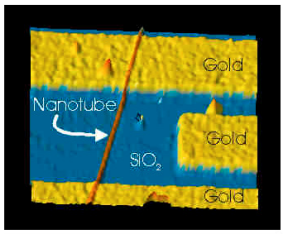
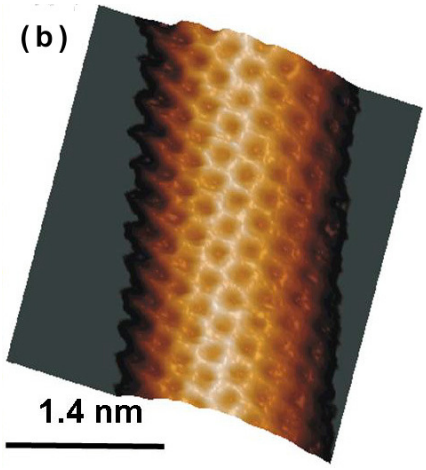


Nanotube field-effect transistor

Transistors are the basic building blocks of integrated circuits. To use nanotubes in future circuits it is essential to be able to make transistors from them. We have successfully fabricated and tested nanotube transistors using individual multi-wall or single-wall nanotubes as the channel of a field-effect transistor (FET).





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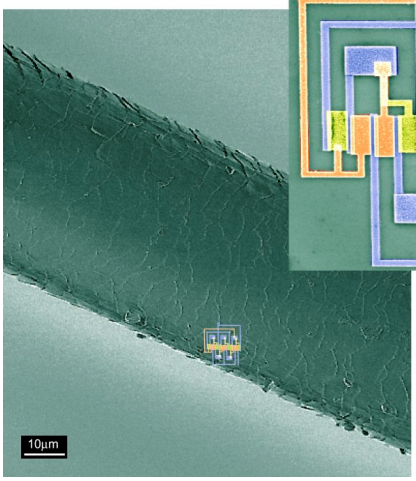
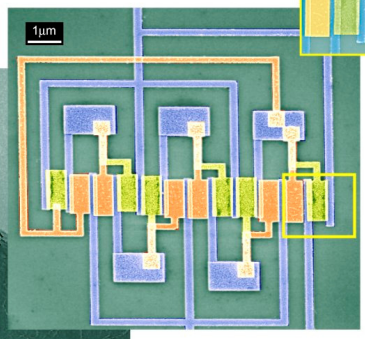
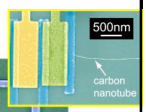
A circuit on a molecule?







Researchers have just discovered how to build the first complete electronic integrated circuit around a single carbon nanotube molecule

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Wearable computers: Aesthetics

How comfortable would you be chatting socially with this guy?

Figure from Proem, a wearable system for exchanging flexible user profiles

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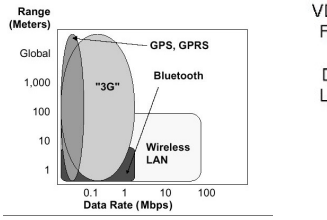
Accès hauts débits : une richesse de solutions



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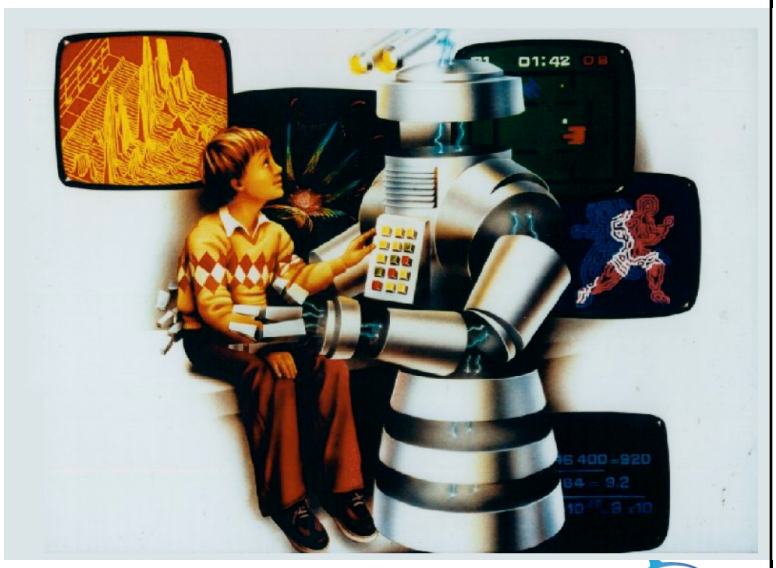

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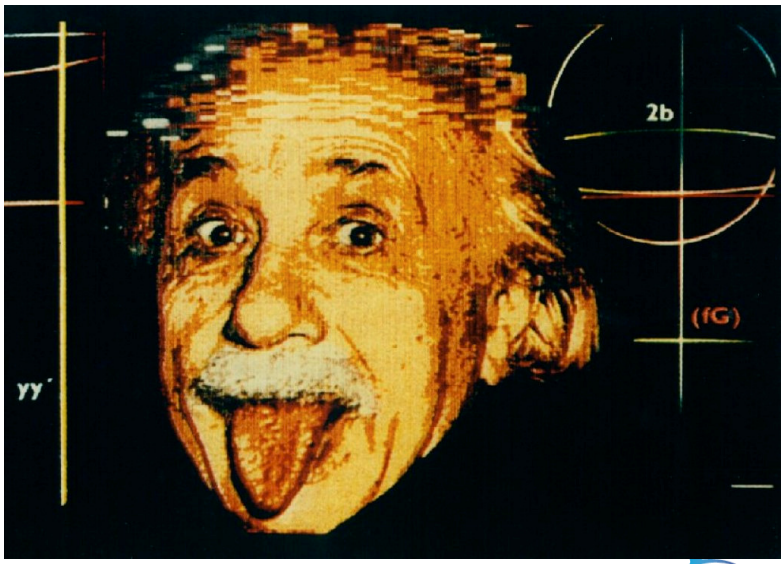

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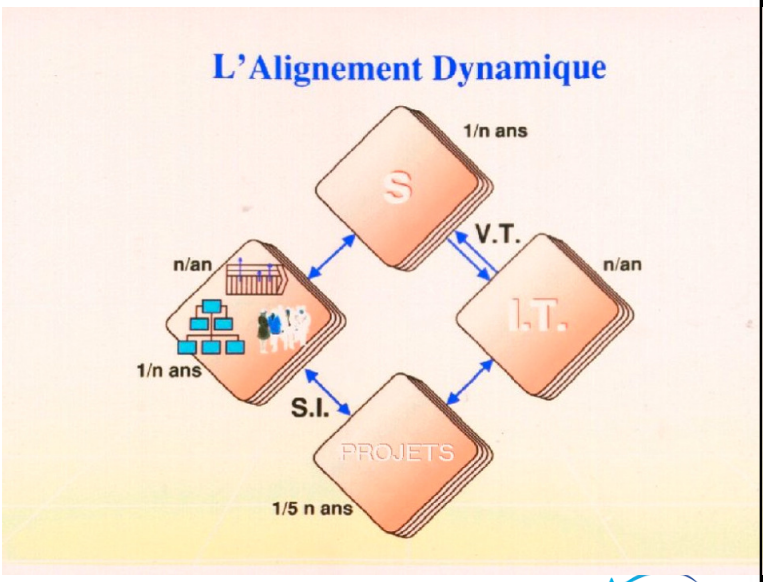
L'Alignement Dynamique



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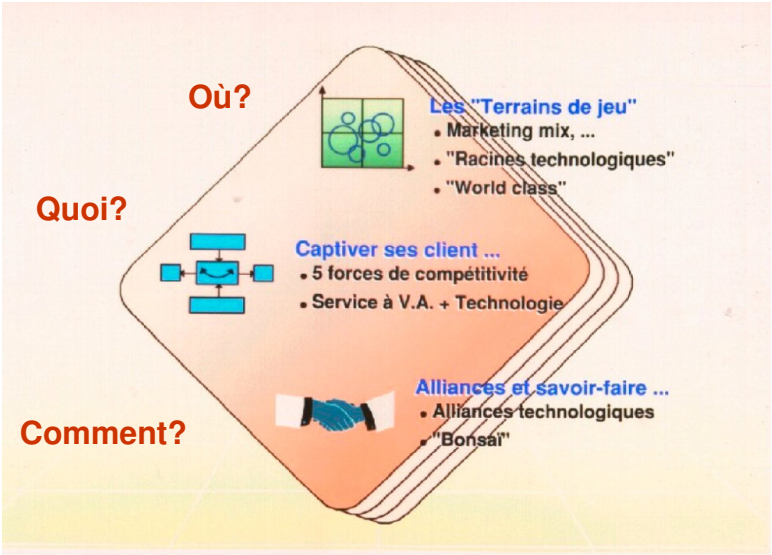
Où? Quoi? Comment?



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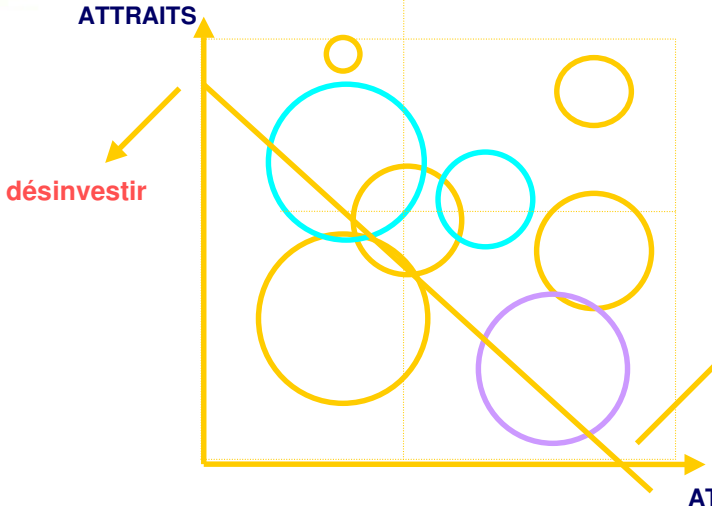
Terrain de jeu: Où?



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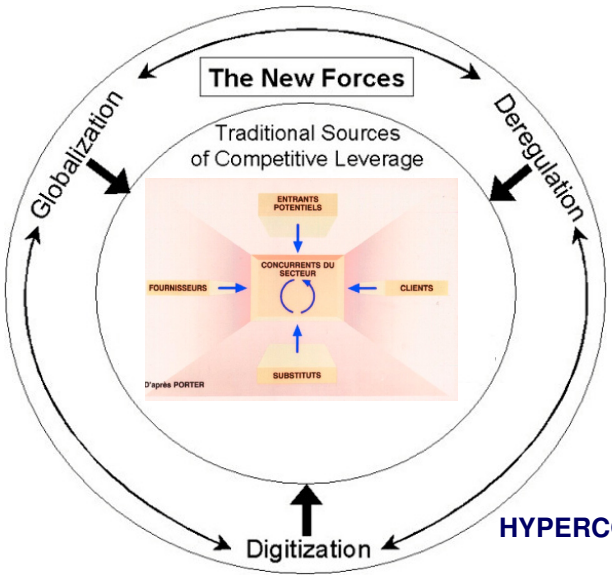
Downes and Mui's New Forces Model



HYPERCOMPETION

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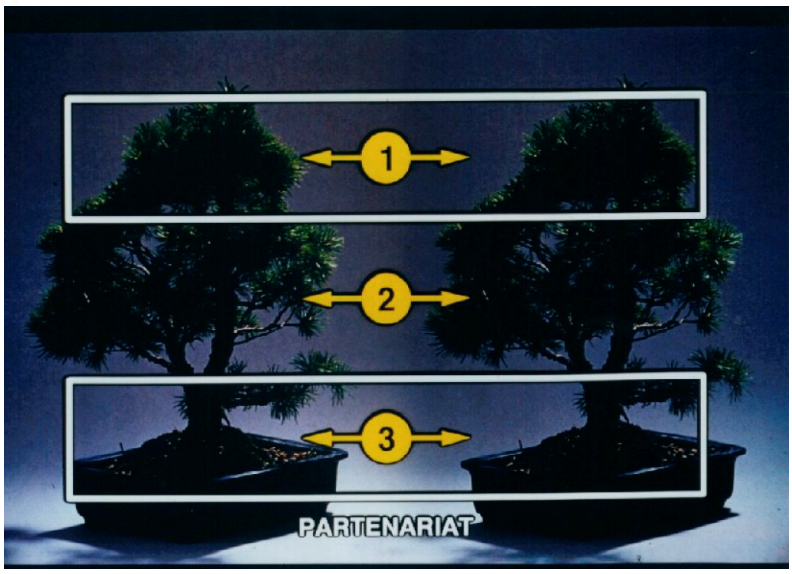
LES GLISSEMENTS DE MÉTIERS

Banques	produits d'assurance, de retraite
Assurance	voyage, loisirs, retraite
Cartes cie crédit	luxe, service, vente par correspondance
Grande distribution	crédit, voyage, assurance
Compagnies des eaux	câblage, télévision, multimédias, bâtiment
Bâtiment	câblage informatique, parcs de jeux, loisirs
Hôpitaux	hôtellerie, informatique médicale
Nucléaire	ingénierie logiciel, systèmes experts
Immobilier	services 3''/4' âges, robotique
Aviation	CAO, informatique embarquée
Hôtels	santé, thalassothérapie, check-up, sports



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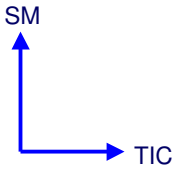
Methode1

a) Changement de paradigme, glissement métiers
Pourquoi achète-t-on ce type de produit ?
→ Nouveaux métiers, concurrents
→ Nouvelle vision

b) Liste des produits/services
Comment ajouter
→ plus de "sur-mesure"
→ des TIC plus émergentes



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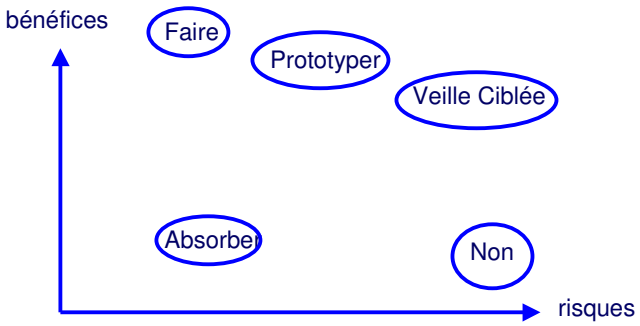
Methode 2

Comment décide-t-on d'y aller ?



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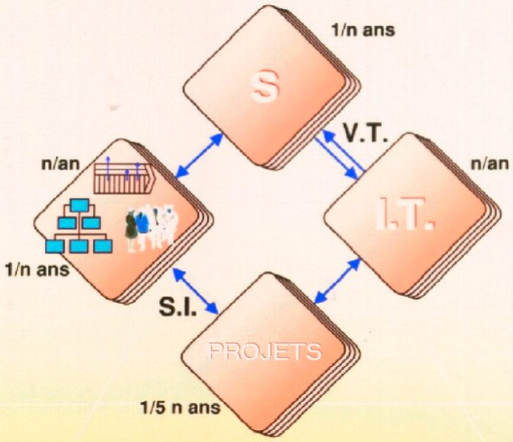
L'Alignement Dynamique



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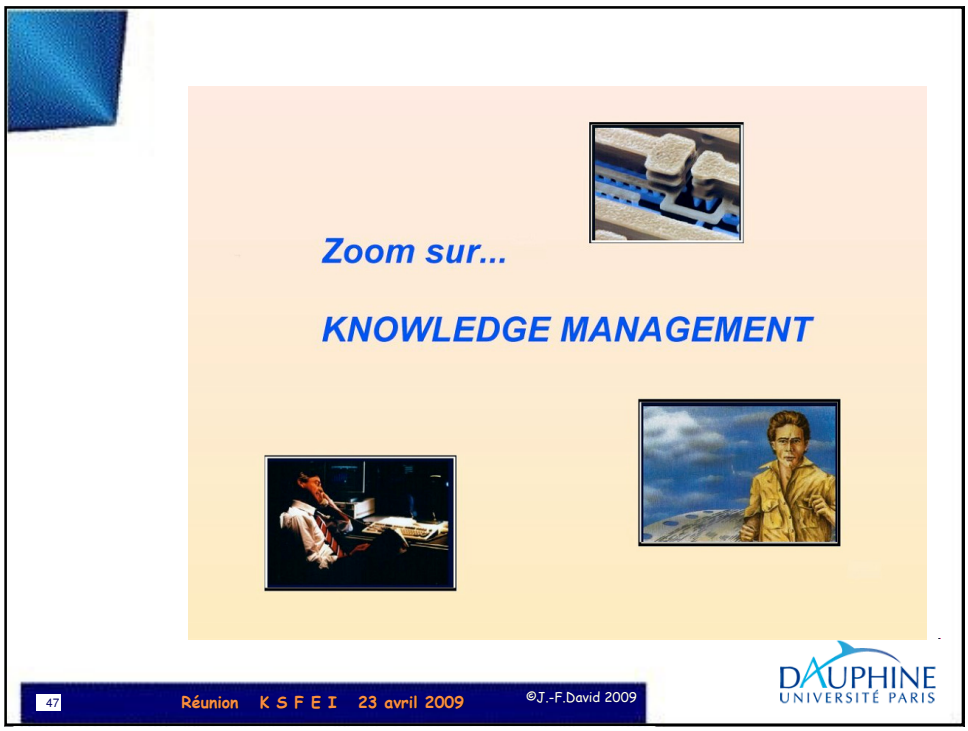
Zoom sur...
KNOWLEDGE MANAGEMENT
47
Réunion K S F E I 23 avril 2009
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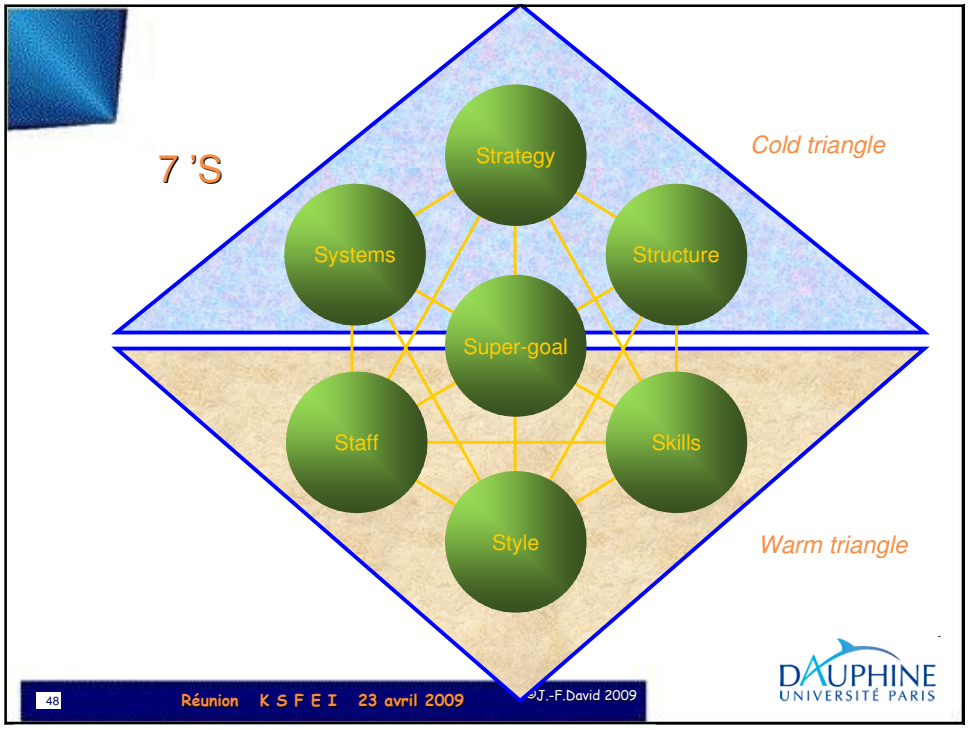
7 'S
Strategy
Systems
Structure
Super-goal
Staff
Skills
Style
Cold triangle
Warm triangle
48
Réunion K S F E I 23 avril 2009
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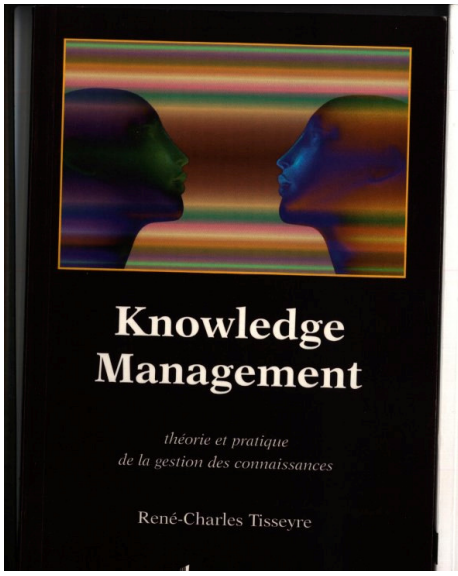
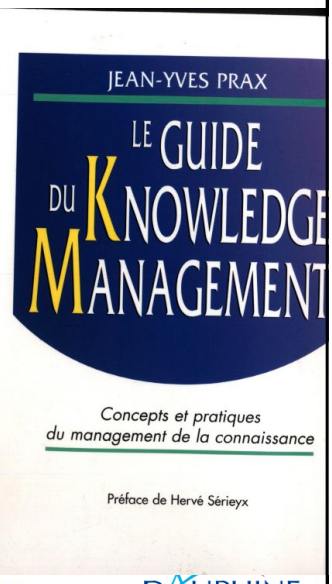
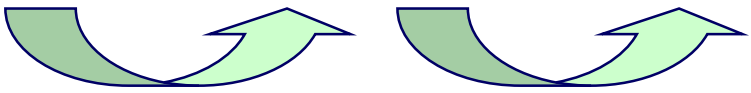




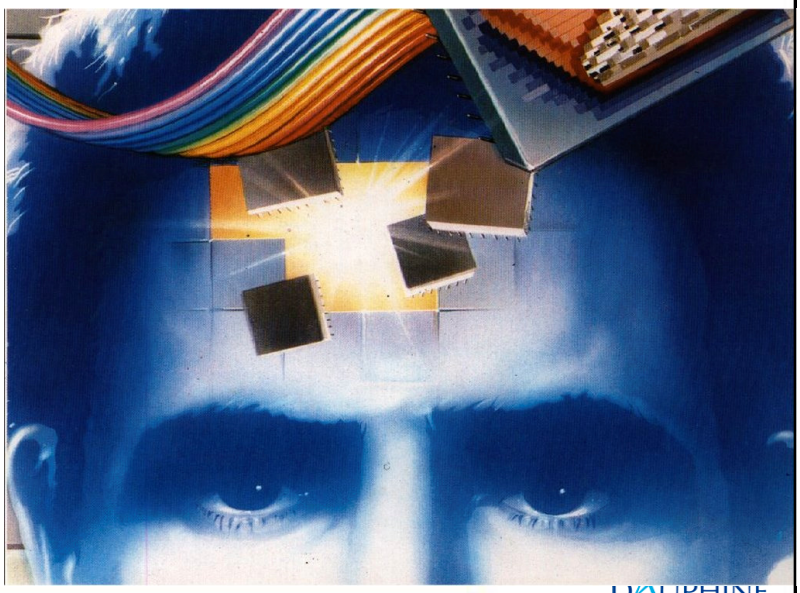
KM, concepts de base...

Données **Information** **Savoir**

Projet "Learning by doing"



Opulence S.I. K.M.



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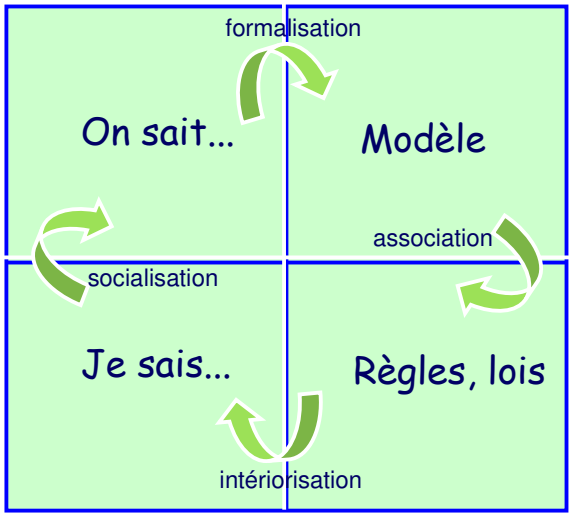

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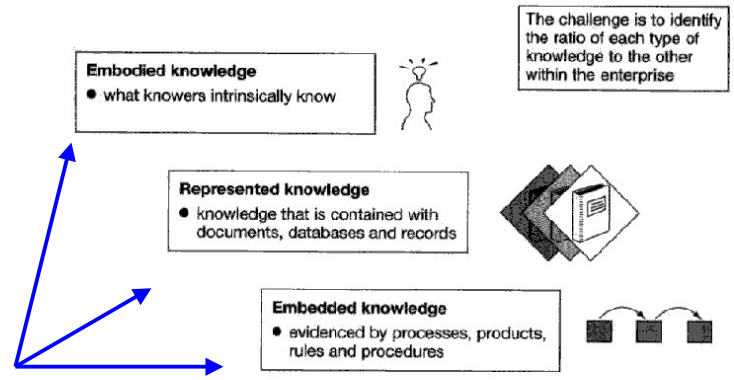
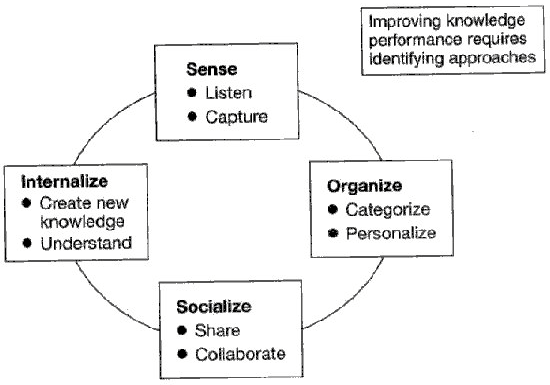


The types of knowledge that exist in and around every organization...

Source: Knowledge Management Gamble/Blackwell Kogan Page 2002



Approaches for managing knowledge processes

Source: Knowledge Management Gamble/Blackwell Kogan Page 2002

Approach \ Type	Embodied	Represented	Embedded
Sense	**Observe** • Knowledge surveys • Workshops/interviews • Network analysis	**Gather** • Business intelligence • Text and data mining • Intelligent agents	**Hypothesize** • Market/customer/ competitor analysis • Modeling/reasoning tools • Reverse engineering
Organize	**Contextualize** • Focus groups • Expertise guides • Knowledge coordinators	**Categorize** • Knowledge taxonomies • Libraries • Data marts	**Map** • Job/workplace design • Workflow analysis • Performance measures
Socialize	**Share** • Mentoring/coaching • Communities of practice • Conferencing tools/ groupware	**Disseminate** • Broadcast tools/Internet/ Intranet/e-mail • Distance learning • Application systems	**Simulate** • Scenario planning • After-action reviews • Training/competency management
Internalize	Apply – Decide – Act		

The KM Matrix

Range of tools used in approaches to knowledge management

Source: Knowledge Management Gamble/Blackwell Kogan Page 2002

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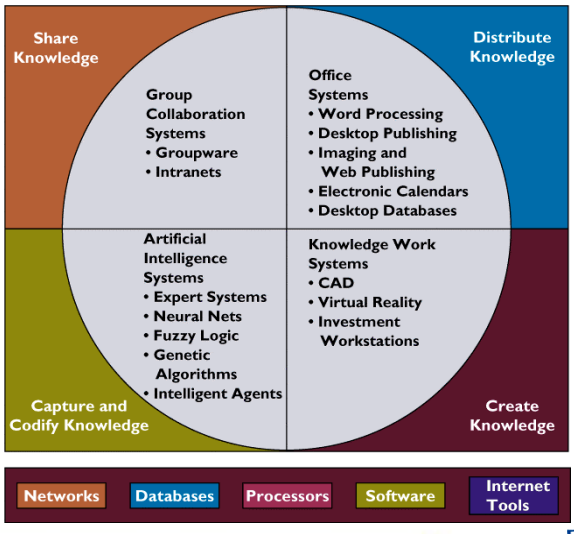
KM and ICT (Processes and Tools mapping)



IT Infrastructure for Knowledge Management

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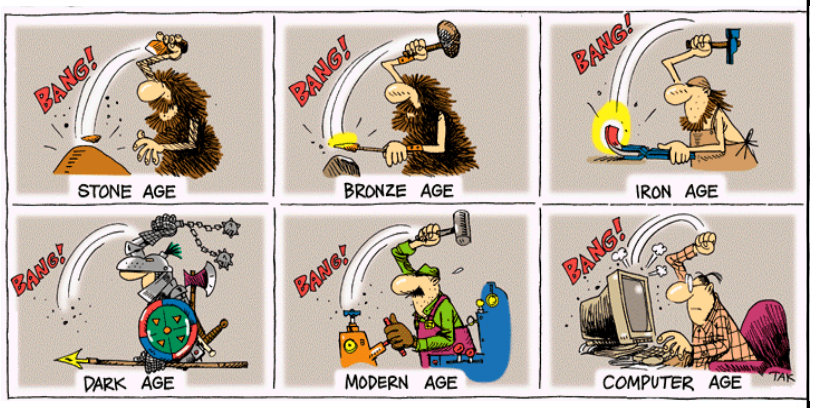

„If we spend more that 1/3 of KM budget on IT it is no longer a KM project but IT project"

Laurence Prusak, Thomas Davenport

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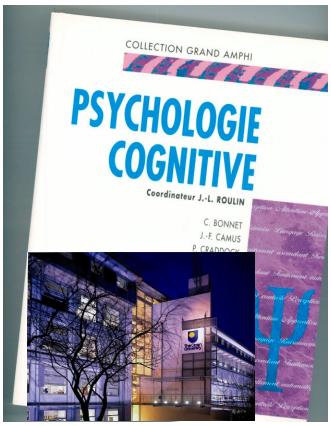
e-learning



Illumination

Approfondissement

Définition Projet

Projet

Capitalisation vers la suite....

Vers un mix de media...

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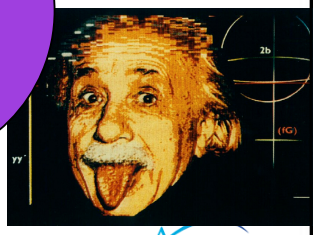
Une cross-fertilisation nécessaire

NOUVELLES TECHNOLOGIES...

EDUCATION

FORMATION....

ERGONOMIE
COGNITIVE...



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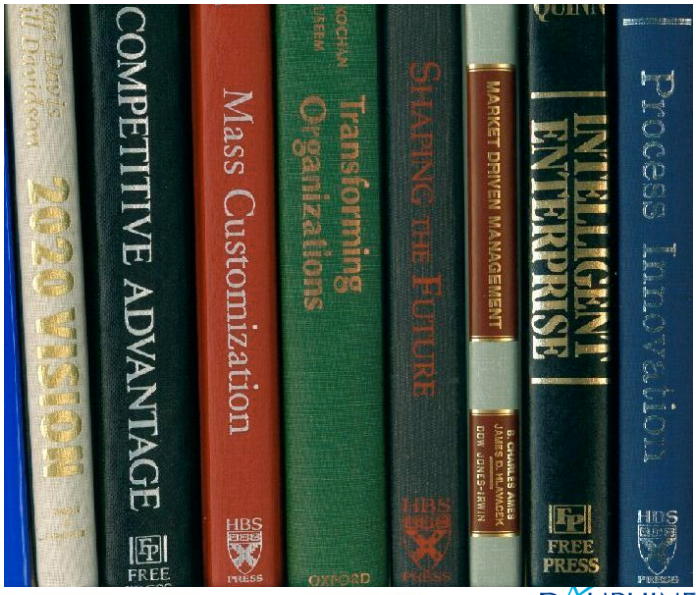

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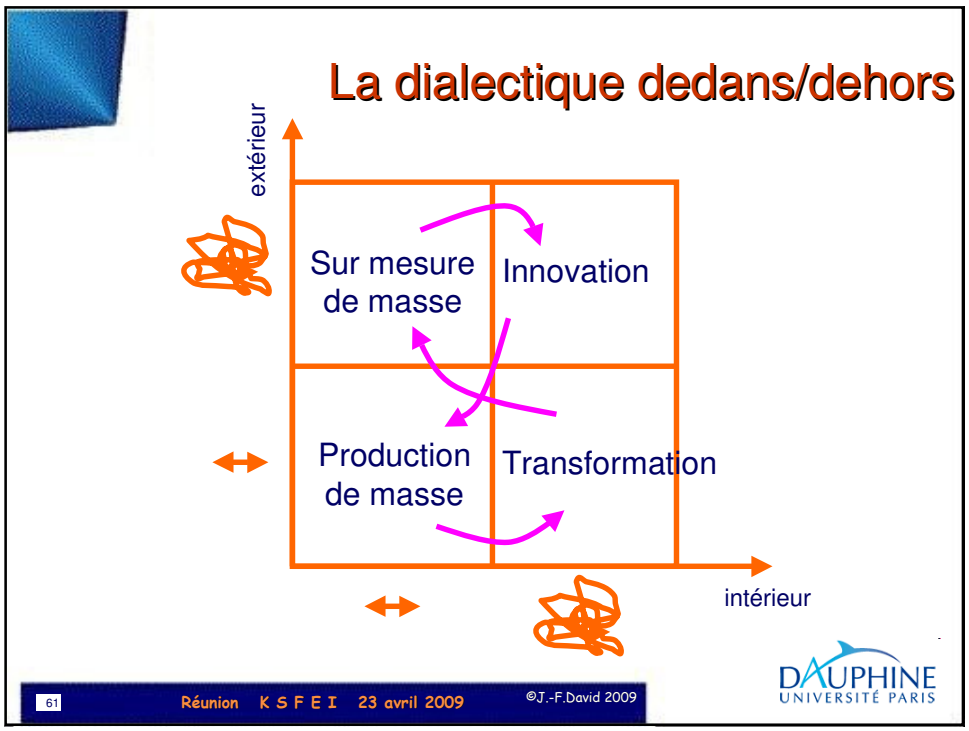
La dialectique dedans/dehors
extérieur
Sur mesure de masse
Innovation
Production de masse
Transformation
intérieur
61
Réunion K S F E I 23 avril 2009
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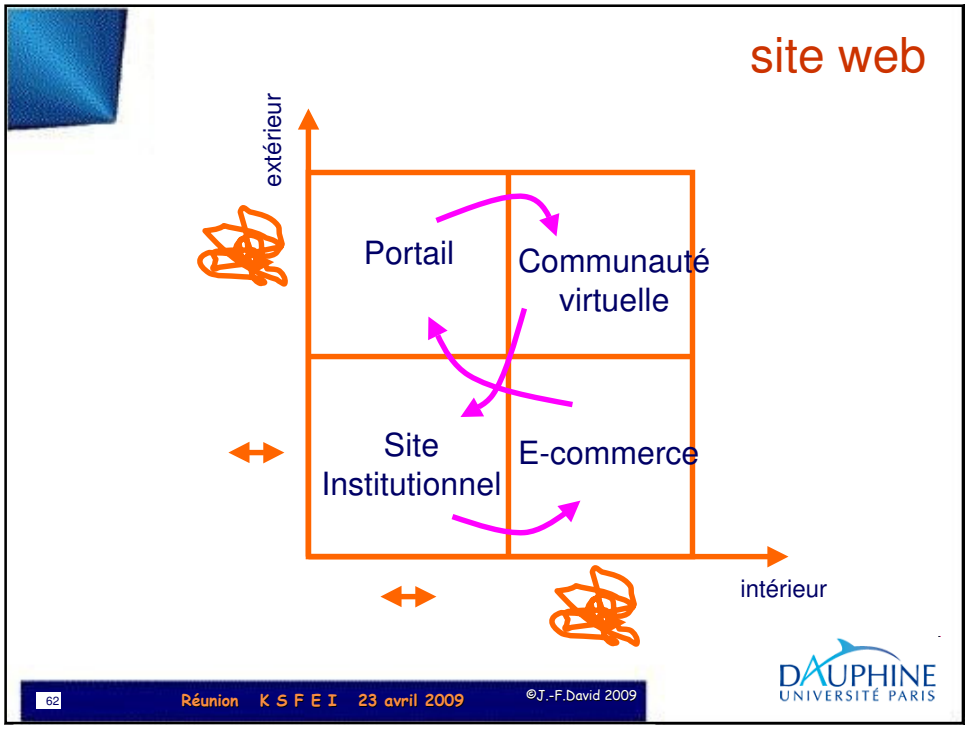
site web
extérieur
Portail
Communauté virtuelle
Site Institutionnel
E-commerce
intérieur
62
Réunion K S F E I 23 avril 2009
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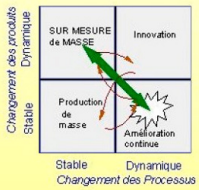
70% des efforts de transformation butent sur le facteur humain.....



Comment savoir ?

Et les autres?

dirigeants vs employés ?

Les 15 "critères" de Carnegie-Mellon.....

VISION
VALEURS
CULTURE ORGANISATIONNELLE
STRUCTURE
COMMUNICATIONS
PRISE DE DECISION
MESURE DE PERFORMANCE
RENUMERATION
Programmes DRH
CONTRAT
COMPETENCES INDIVIDUELLES
LEADERSHIP
CAPACITES de l'ORGANISATION
MORAL
TOLERANCE au CHANGEMENT

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Vision :
Auto-projection à 3/5 ans de l'entreprise, décidée par la direction et véhiculée et appropriée par le management

Valeurs :
Plus pérennes, liées à l'histoire de l'entreprise, explicites ou implicites

Culture Organisationnelle :
Rigueur ou souplesse des règles, rigueur ou souplesse de leur application

Structure :
Type d'organisation, classique, matricielle, réseaux, …

Communication :
Mode de communication, descendant, montant, transverse, …

Décision :
Qui décide et comment?

Performance :
Sur quoi mesure-t-on les individus?

Apprentissage :
Modalité de l'accroissement des savoirs

Compétences :
Quelle compétence recherche-t-on, favorise-t-on?

Leadership :
Archétype ambiant en ce qui concerne "l'image du chef"

Motivation :
"A quoi" marchent les individus?

Changement :
Positionnement par rapport aux changements

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Short "Culture" test based on IBM Consulting Group expertise

1) Which of these sentences describes in closer the "vision" of your entity
a) We focus on the value creation thanks to our innovations and to our know-how
b) We focus on the rise of the customer satisfaction thanks to the improvement of our processes
c) We focus on the increase of the variety and the level of adaptation of our products / services offers thanks to the flexibility of our processes and the decrease of the response times
d) We focus on the efficiency through our objectives and our controls
2) What of these various approaches is the most valued in your entity?
a) Be capable of adapting itself quickly to changeable needs
b) Make things for the way they must be made
c) Find new innovative manners to make things
d) Always look for the most effective way of making things
3) What of these sentences describes best your organization?
a) We have habits and some main rules and we are flexible
b) We have clear and described rules and they must be respected and followed
c) We have habits and some main rules, but we are strict on their application
d) We have clear and described rules, but we are flexible
4) What describes best the way people work in your entity?
a) The work is mostly made in cooperation between people of different structures
b) People work mainly only
c) People work mostly in cooperation, in multi-professions teams formed in a informal way according to the task to be made
d) People work mostly with colleagues of their specific profession
5) What describes best the way people communicate professionally?
a) People rely mainly on informal information
b) The information rises permanently towards the hierarchy (bottom / up)
c) The information navigates freely in all the directions, in a formal and informal way
d) The information comes mainly from the hierarchy (top / down)
6) What describes best the way the decisions are taken in your entity?
a) In a collective way
b) Hierarchical
c) In a transverse, inter-functional way
d) Delegation, empowerment

7) What reflects in closer the way the performance is estimated?
a) By the individual contribution to new and\or better manners to do
b) By the level of supplied service
c) By the weak number of defects or errors
d) By the amount of work supplied
8) What reflects best the capacity of your entity to learn and to innovate?
a) The entity learns in a progressive way
b) The capacity of the entity to learn is weak
c) The organization learns after the implementation of specific programs
d) The entity is endowed with an integrated system for permanent learning
9) What describes in closer what is professionally asked to the actors of your entity?
a) Competence and wide, inter-functional knowledge
b) Competence and knowledge defined in a precise way
c) A high level specialized competence and knowledge
d) Competence and knowledge complementing those the others in the teams
10) What describes best the style of "leadership" in your entity?
A) Orchestrator
B) Decision-maker
C) Participative
D) Entrepreneur
11) What influences most strongly the morale of the actors in your entity?
a) Satisfy every customer
b) The "rewards" and the "penalties"
c) Personal auto-motivation
d) The shared values
12) What is the level of acceptance of the change in your entity?
a) The persons generate the change
b) The persons resist to the change
c) The persons accept the progressive change
d) The persons manage the permanent change

Cultures....

Invention	
Vision	Entrepreneuriale
Valeurs	Innovation
Culture	Très informelle
Structure	Corporation
Communications	Réseaux informels
Processus de décision	Participatif
Contrat de travail	Individualisé
Evaluation de performance	Créativité
Rémunération	Individuelle
Politique Res. Humaines	Flexible
Capacités	Créatives
Compétences individuelles	Expert
Leadership	Entrepreneurial
Moral	Motivation personnelle
Tolérance au changement	Génère le changement

Stable
Dynamique
Production de masse
Amélioration continue
Stable Dynamique
Changement des Processus

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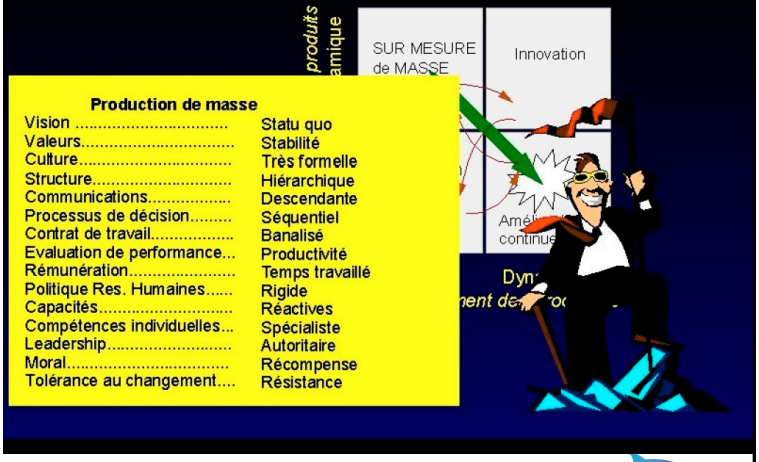
Cultures....



Production de masse	
Vision	Statu quo
Valeurs	Stabilité
Culture	Très formelle
Structure	Hiérarchique
Communications	Descendante
Processus de décision	Séquentiel
Contrat de travail	Banalisé
Evaluation de performance	Productivité
Rémunération	Temps travaillé
Politique Res. Humaines	Rigide
Capacités	Réactives
Compétences individuelles	Spécialiste
Leadership	Autoritaire
Moral	Récompense
Tolérance au changement	Résistance

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Cultures....

Transformation	
Vision	Qualitative
Valeurs	Efficience
Culture	Formelle
Structure	Equipe
Communications	Ascendante
Processus de décision	Consensuel
Contrat de travail	Volontaire
Evaluation de performance	Défauts
Rémunération	Equipe
Politique Res. Humaines	Innovative
Capacités	Anticipation
Compétences individuelles	Réalisation
Leadership	Faciliteur
Moral	Reconnaissance
Tolérance au changement	Progressive

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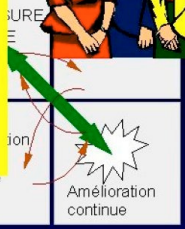
Cultures....

Sur-mesure de masse	
Vision	Sur mesure
Valeurs	Adaptation
Culture	Informelle
Structure	Réseaux
Communications	Réseaux
Processus de décision	Autonome
Contrat de travail	Compétence
Evaluation de performance	Service
Rémunération	Fixe+variable
Politique Res. Humaines	"libre service"
Capacités	Génératives
Compétences individuelles	Polyvalence
Leadership	Orchestrateur
Moral	Réalisation collective
Tolérance au changement	Change permanent



Stable Dynamique

Changement des Processus

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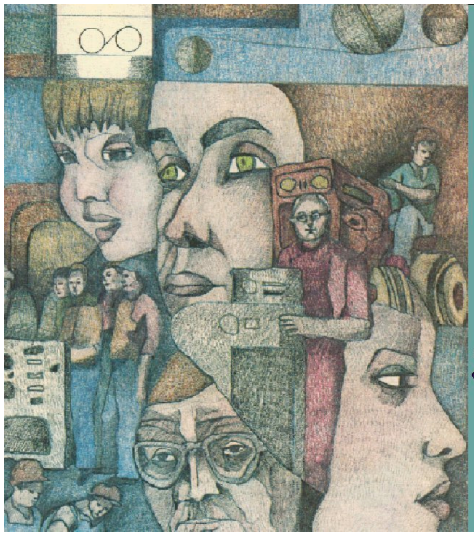
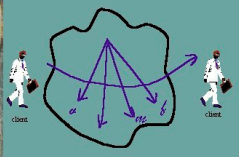


A LA RECHERCHE DE P.G.C.C.



Plus Grande Commune Culture

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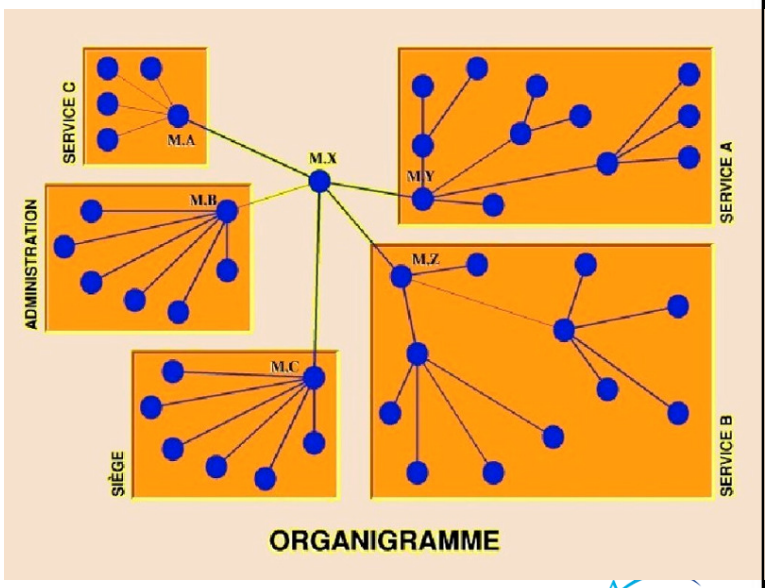
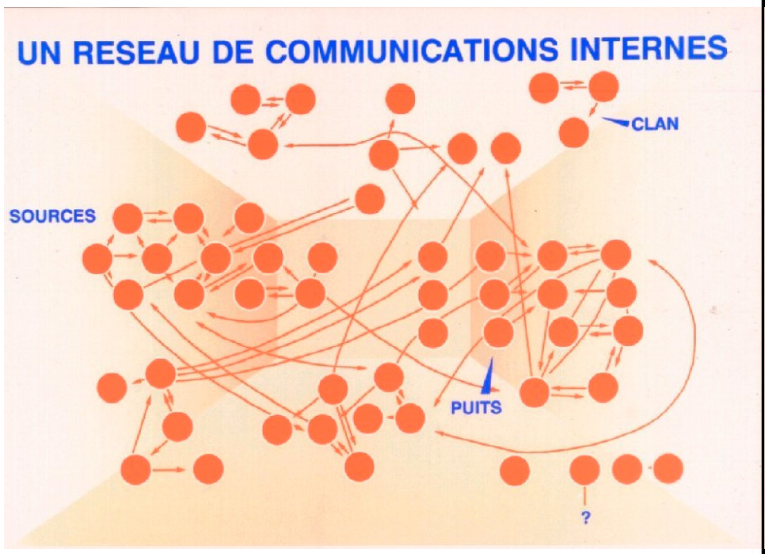
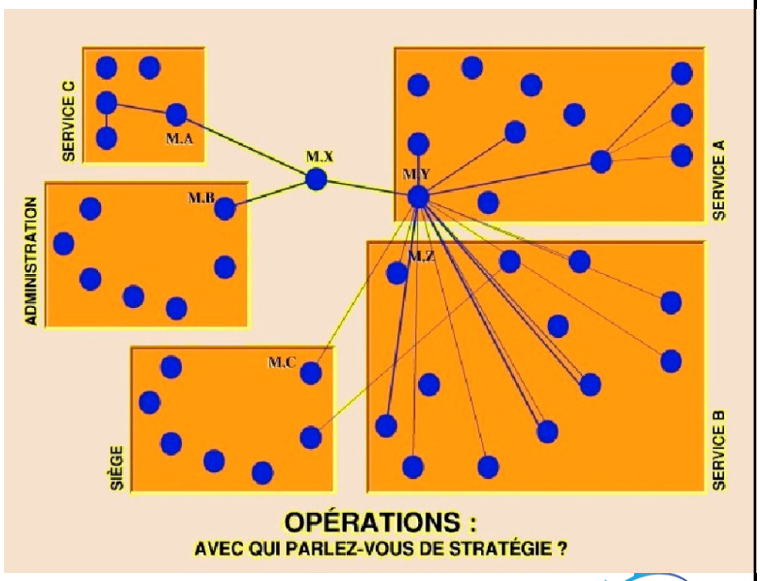

SERVICE C
M.A
M.X
M.Y
SERVICE A
ADMINISTRATION
M.B
M.Z
M.C
SIÈGE
SERVICE B
ORGANIGRAMME


UN RESEAU DE COMMUNICATIONS INTERNES
CLAN
SOURCES
PUITS
?



OPÉRATIONS :
AVEC QUI PARLEZ-VOUS DE STRATÉGIE ?

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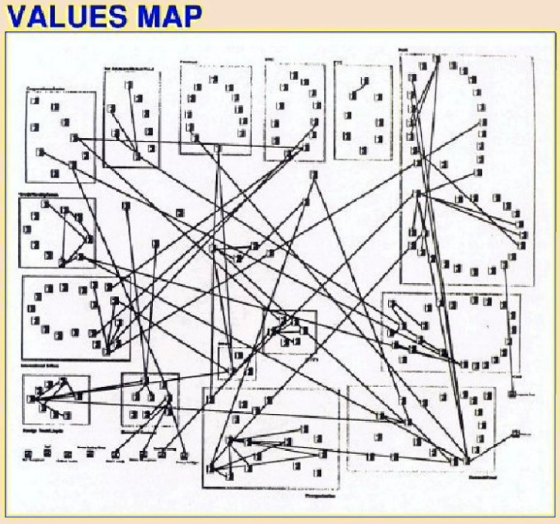
VALUES MAP



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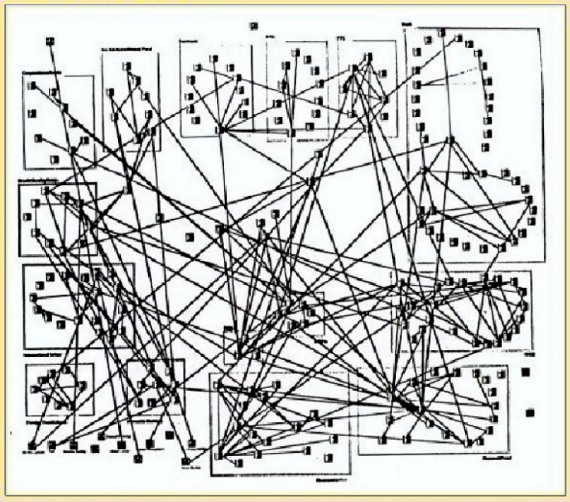
EXPERT MAP



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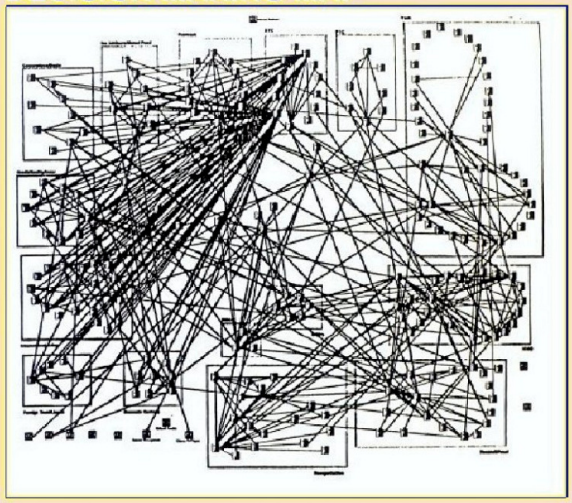
DECISION MAKING MAP



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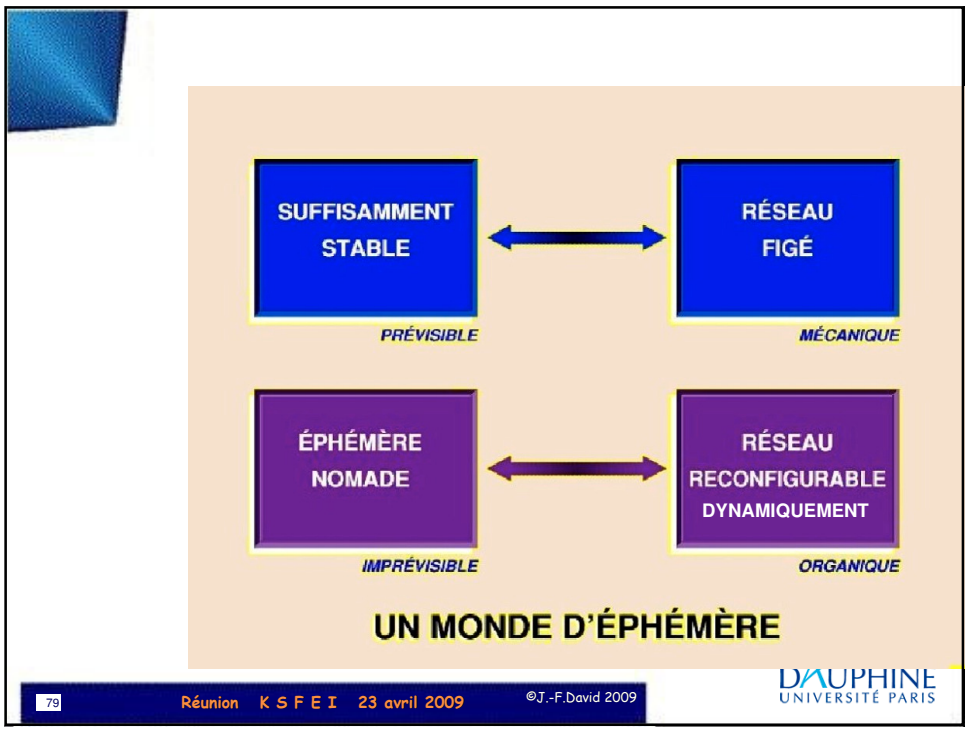
SUFFISAMMENT STABLE
PRÉVISIBLE
RÉSEAU FIGÉ
MÉCANIQUE
ÉPHÉMÈRE NOMADE
IMPRÉVISIBLE
RÉSEAU RECONFIGURABLE DYNAMIQUEMENT
ORGANIQUE
UN MONDE D'ÉPHÉMÈRE
79
Réunion K S F E I 23 avril 2009
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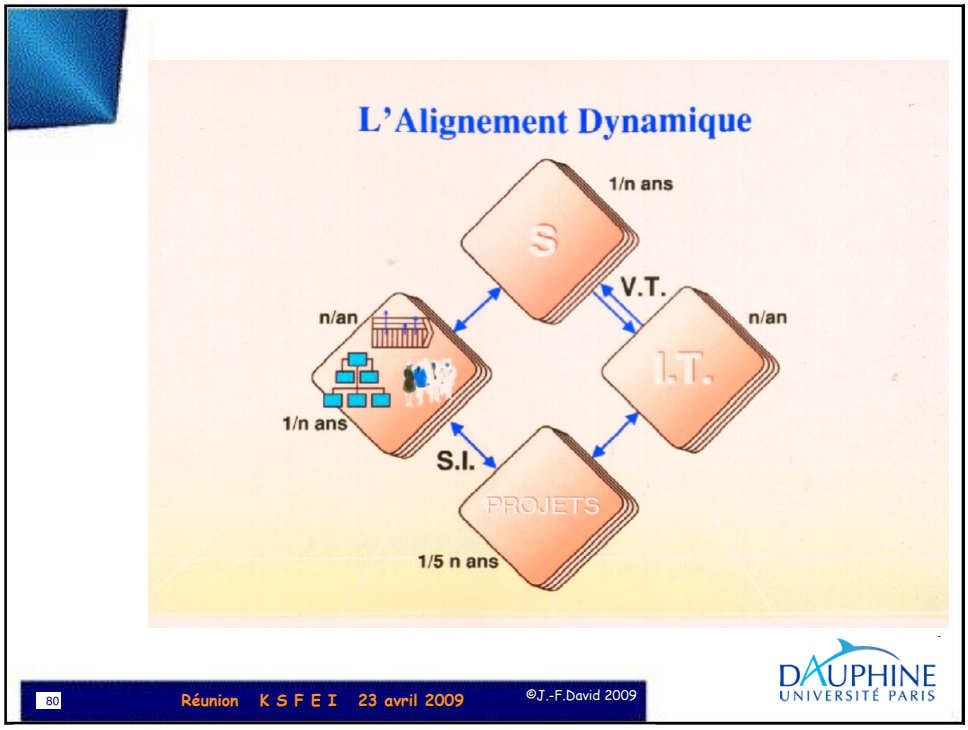
L'Alignement Dynamique
1/n ans
S
V.T.
n/an
n/an
I.T.
1/n ans
S.I.
PROJETS
1/5 n ans
80
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Blog: freejfd@blogspot.com

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Zoom sur les systèmes et les technologies de l'information...

Le rôle clé des processus….

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