

UNDERSTANDING THE DYNAMICS OF DIGITAL : ACCELUCTION IN ACTION

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Intellectual Capital Research Society (WICRS)
Knowledge Management Society Japan
(KMSJ)
World Intellectual Capital/Assets Initiative
Japan (WICI)

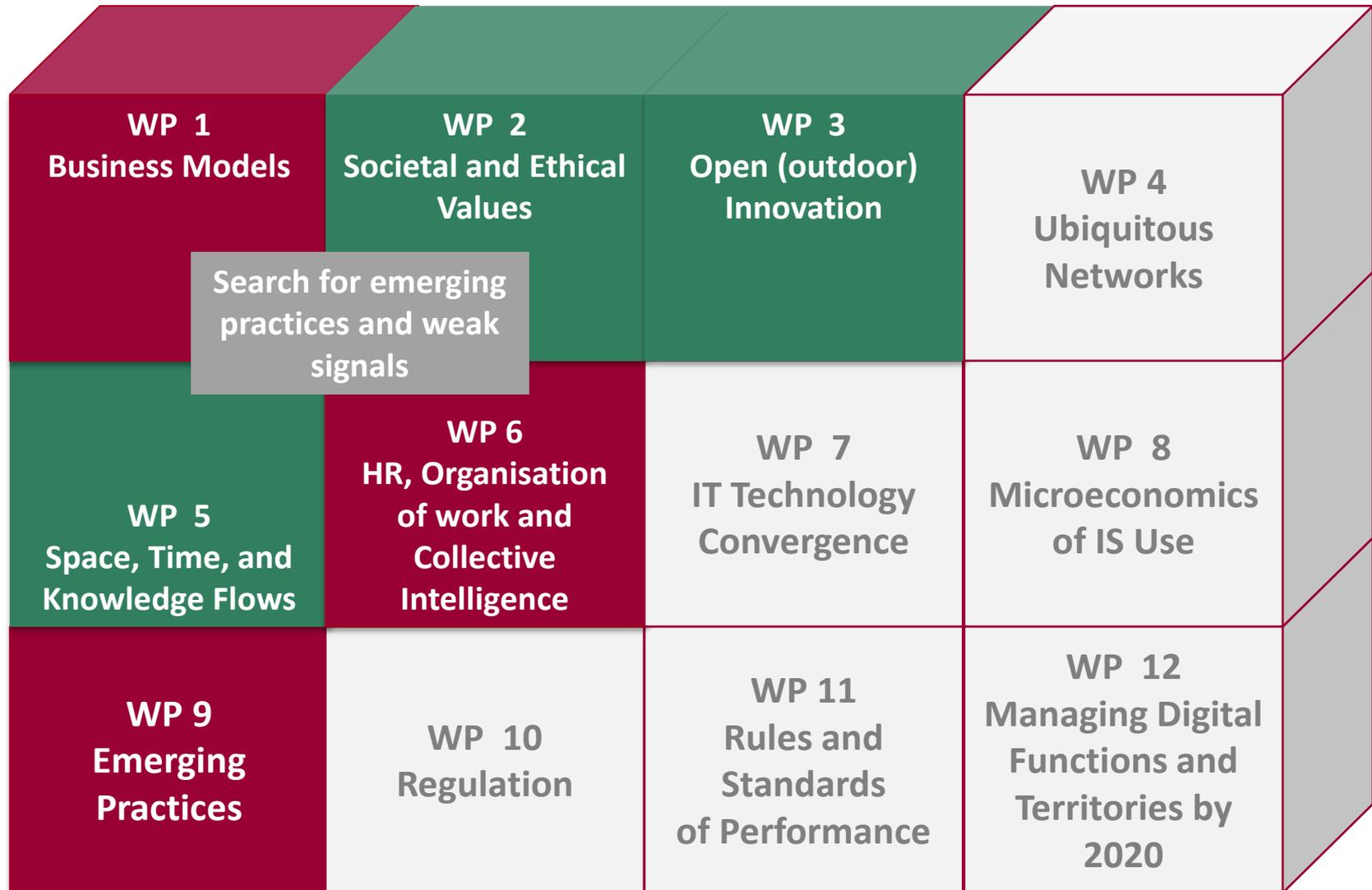
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**Context, Objectives and general
approach to ISD programme**

1- The objectives of ISD programme

- ✔ Make the link between the past and the future of use of Information systems /digital resources (1970-2020)
 - ✔ Draw the attention of Executives (CEOs, CIOs...) to the important strategic stakes, related to the transition from the industrial economy to the networked (knowledge/intangibles) economy and society
 - ✔ Propose the building blocks of the understanding of the implications of such transformation
 - ✔ Design the 2020 enterprise and its related digital resources /function
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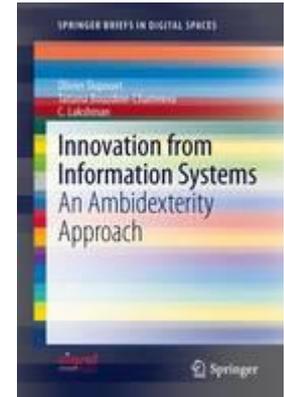
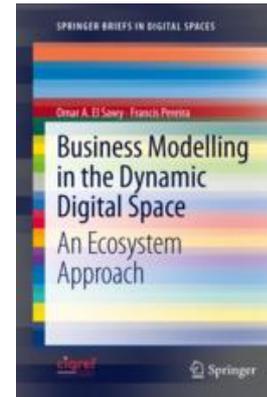
Three calls for projects : Wave A, Wave B, Wave C and General structure of ISD



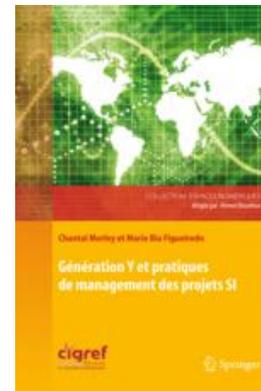
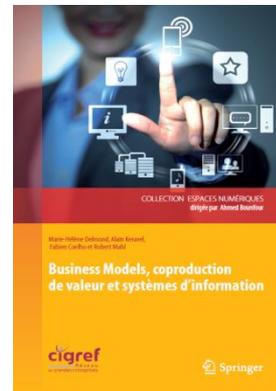


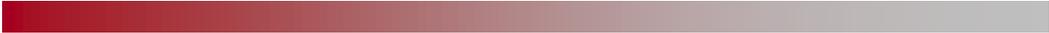
Two series with Springer to disseminate projects' results

SpringerBriefs in Digital Spaces



Espaces numériques



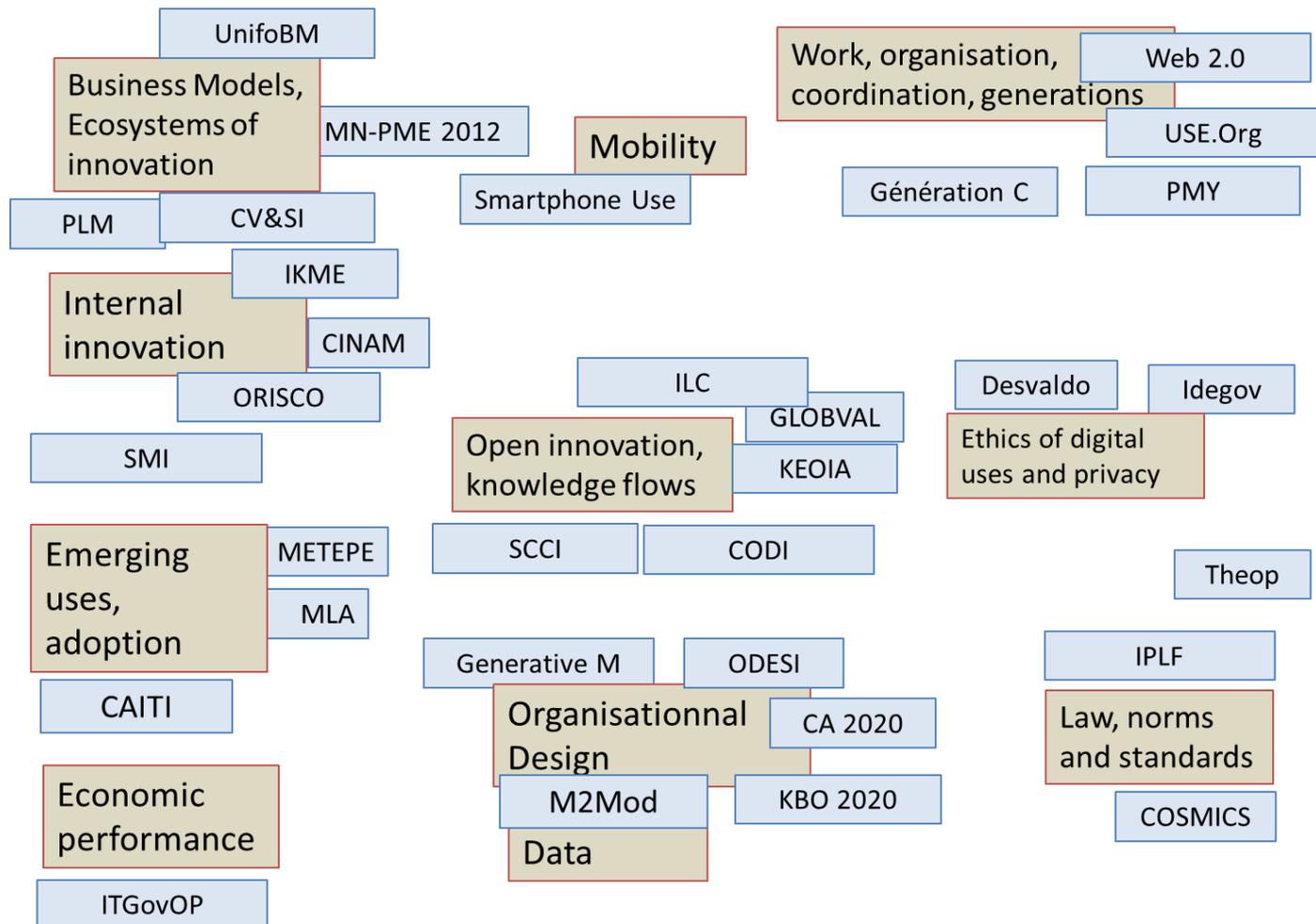


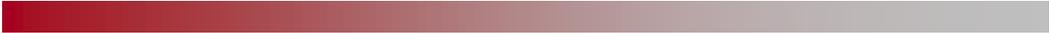
2- Thematic of projects



Cluster map of ISD projects

Figure 1.6. Cluster map of ISD projects





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**The programme results:
25 proposals, one production system**



3.1-ISD Programme and the digital transformation

25 proposals / 7 dimensions

I-Emerging business models

II- Work, coordination and digital uses

III- Internal innovation practices

IV- Open (external) innovation practices

V- Enterprise space and knowledge flows

VI-The social and ethical dimensions of use

VII- Data, intellectual property, and the specificity of digital



P1	P2	P3	P4	P5
P6	P7	P8	P9	P10
P11	P12	P13	P14	P15
P16	P17	P18	P19	P20
P21	P22	P23	P24	P25

3.1-ISD Programme and the digital transformation

25 proposals / 7 dimensions

I-Emerging business models

1. Business models are undergoing a major transformation, without any fundamental difference appearing between purely digital models and traditional models
 2. The expansion of value creation spaces is a major trend driven by digital
 3. The “customer experience”, mediated by digital platforms, is an essential dimension of emerging digital uses
 4. “Pure” digital business lines (software and services) appear to be quicker to develop adaptive offerings than more “traditional” business lines. New business models call for new managerial skills
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3.1-ISD Programme and the digital transformation

25 proposals / 7 dimensions

II- Work, coordination and digital uses

5. In enterprise 2.0, hierarchy and horizontality (community) are not naturally opposed: they are two distinct but complementary modes of coordination
6. Digital technology is relatively neutral with regard to collaborative uses; uses are also (above all?) driven by organizational specificities. Individuals adapt to the nature of technology by improvisation, especially where the technology is flexible
7. Mobility: the revolution is already visible, but its transformational impacts are still taking shape
8. The behaviors of the new generations (Y and C) reflect new digital uses... but they also derive from earlier managerial practices
9. The impact of digital uses on the question of control needs to be approached indirectly, taking due account of the nature of tasks

3.1-ISD Programme and the digital transformation

25 proposals / 7 dimensions

III- Internal innovation practices

10. Innovation is a complex process, in which *top-down* approaches intermesh with *bottom-up* approaches
11. Internal collaboration on innovation can be far from straightforward, especially in contexts dominated by individual incentives
12. Digital develops a view of the enterprise as a knowledge market, but it also requires the development of approaches centered on more organic relationships
13. The development of innovative digital products and services in a geographically distributed context calls for continuous and repeated management of alignment tensions (between teams, disciplines and functions)

3.1-ISD Programme and the digital transformation

25 proposals / 7 dimensions

IV- Open (external) innovation practices

14. Open innovation practices contribute to performance. They are heavily reliant on—and greatly facilitated by—companies' digital infrastructures

15. Joint collaborative platforms emerge in competitive industries by means of ad-hoc learning processes

16. Online collaboration to develop knowledge can be organized even between people with no previous contact

17. Spot markets, crowdsourcing, communities and hierarchy are complementary spaces, and their overall governance remains to be defined

3.1-ISD Programme and the digital transformation

25 proposals / 7 dimensions

V- Enterprise space and knowledge flows

18. In digital space-time, remote collaboration calls for skills-sharing to be redesigned. Ad-hoc (agile) design methods make this possible

19. In the digital economy, IT entrepreneurship requires the creation of ad-hoc spaces of freedom, especially by large companies

3.1-ISD Programme and the digital transformation

25 proposals / 7 dimensions

VI-The social and ethical dimensions of use

20. For work-related uses, the ethical issues are still emergent. Users are aware of the importance of the topic, but “double-loop” learning is not yet fully in place

21. While mobile uses and ubiquitous connectivity may pose ethical problems for public users, this is far from being a universal issue, especially in Asia

22. The hypothesis of the end of privacy, by a general over-exposure of individuals, is not confirmed. Individuals adjust their exposure behavior to the policies of operators like Facebook, and indeed to the structure of their own social networks

3.1-ISD Programme and the digital transformation

25 proposals / 7 dimensions

VII- Data, intellectual property, and the specificity of digital

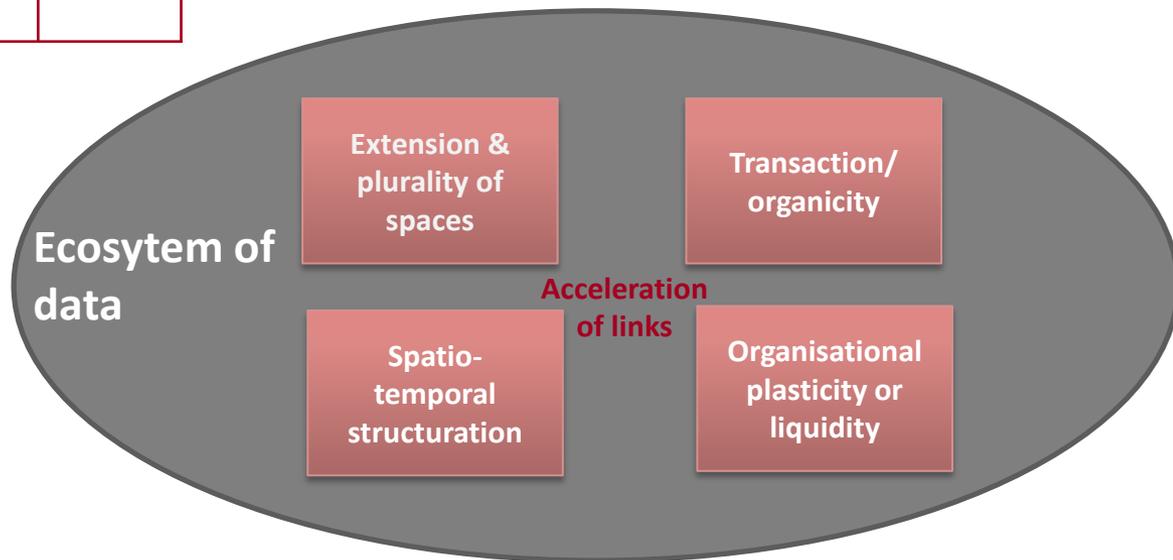
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|--|
| 23. Digital induces tensions between regulation and freedom, and between privacy and the freedom to do business. Copyright, in particular, is endangered by the development of open-source and open-access practices |
| 24. Digital is a generative machine that produces spontaneous, unexpected innovations, often contributed by external developers |
| 25. Network abundance multiplies the tensions involved in organizing the enterprise (fly-by-wire vs. decision support; security vs. privacy; ownership vs. profitability; public goods vs. private goods) |
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3.2. DESIGNING THE 2020 ENTERPRISE: *The conceptual building blocks*

P1	P2	P3	P4	P5
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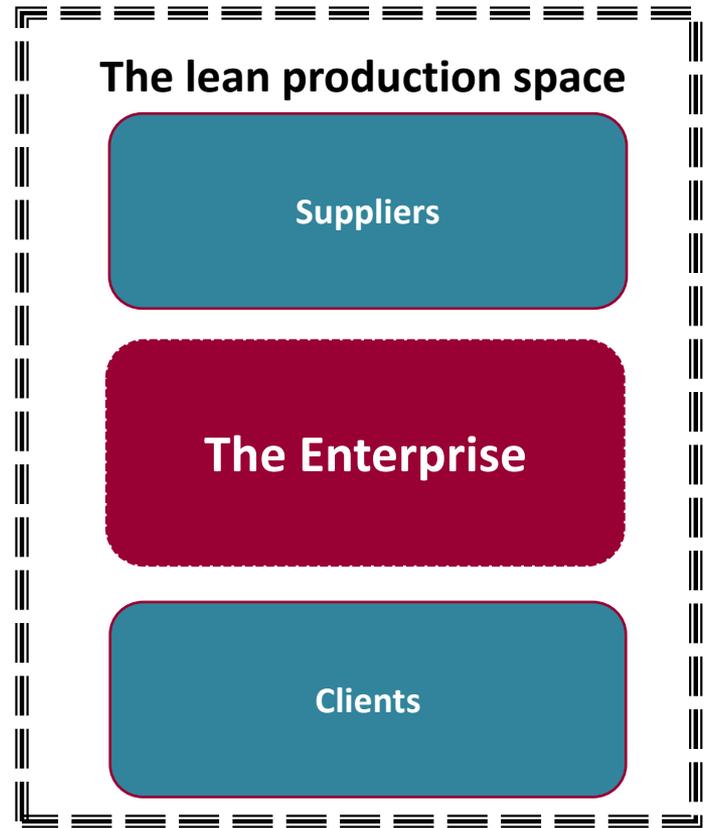
“The acceleration of links, at the core of digital transformation”



3.2. DESIGNING THE 2020 ENTERPRISE: *The conceptual building blocks From Lean Production to Accelution*

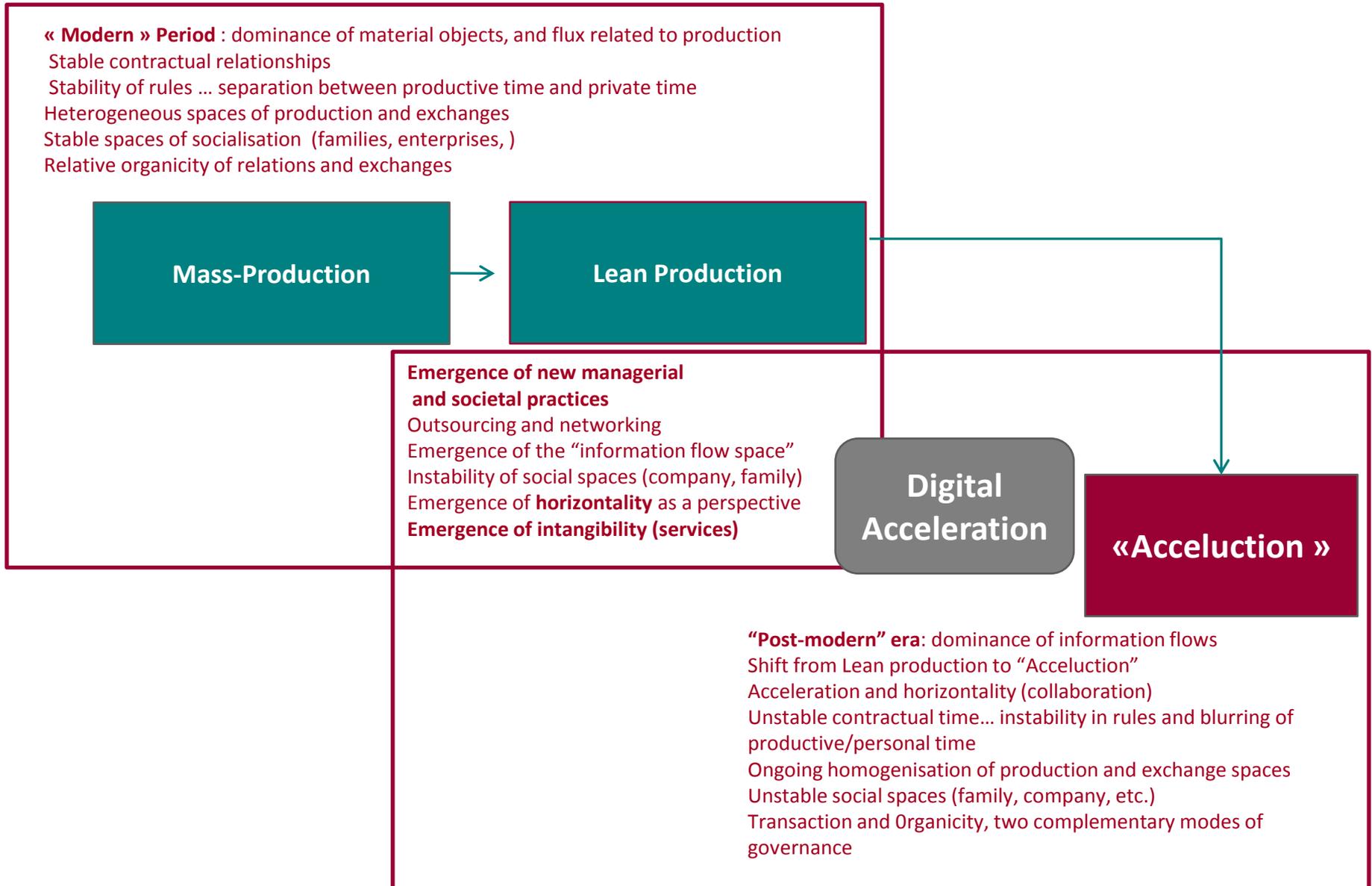
Lean Production (relative to mass production)
The principles of Lean production include: <ul style="list-style-type: none">• Teamwork• A focus on communication• Efficient use of resources and elimination of waste• Continuous improvement
Compared to mass production, Lean production means: <ul style="list-style-type: none">• ½ the human effort in the factory• ½ the manufacturing space• ½ the investment in tools• ½ the engineering time (hours)• ½ the new product development time

Table 3.2: Lean production: key characteristics
Source: Womack, Jones, Roos, The Machine that Changed the World, 2001

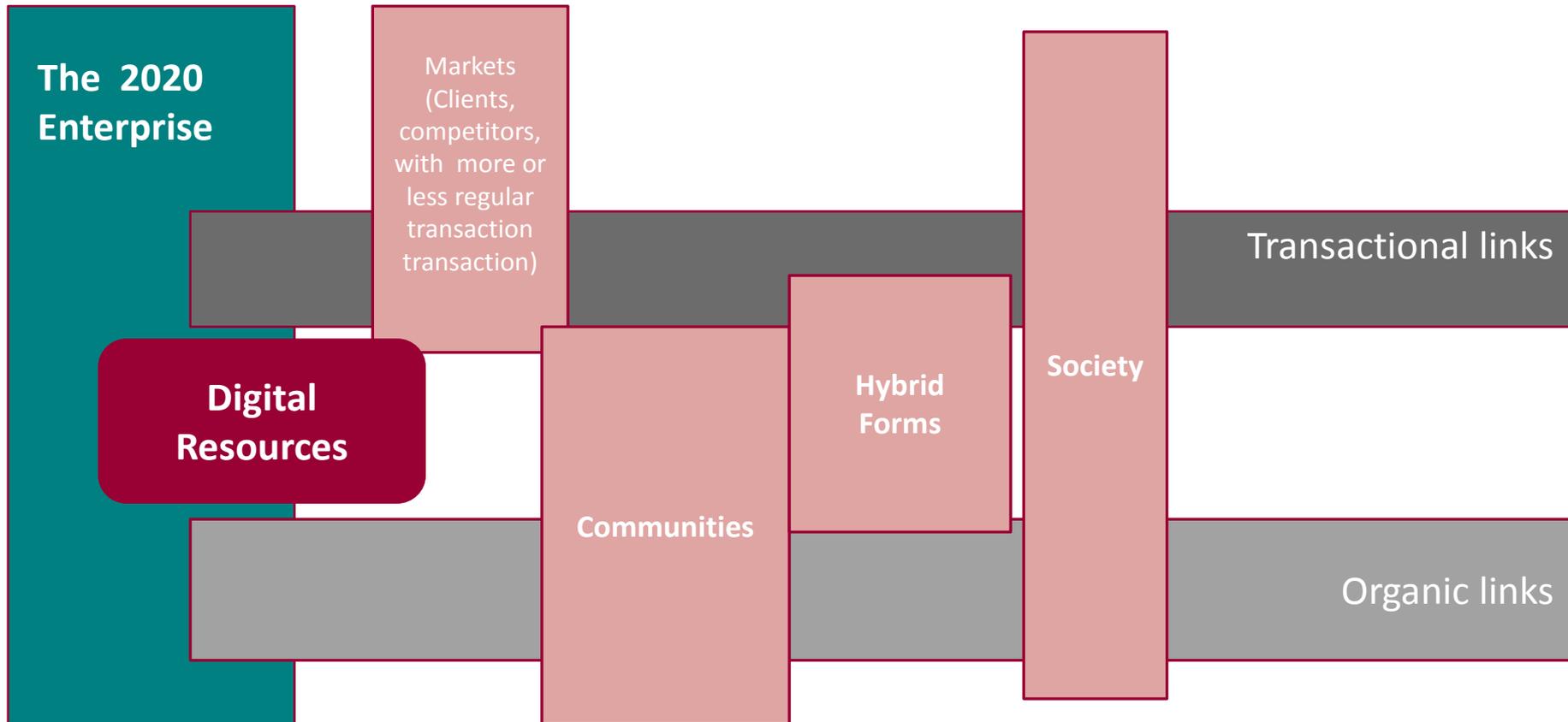


3.2. 3.2. DESIGNING THE 2020 ENTERPRISE:

The conceptual building blocks From Lean Production to Acceluction



3.2. DESIGNING THE 2020 ENTERPRISE: *The conceptual building blocks Topography of Accelucation*



... A large scope of action for the Enterprise in mobilising its digital resources



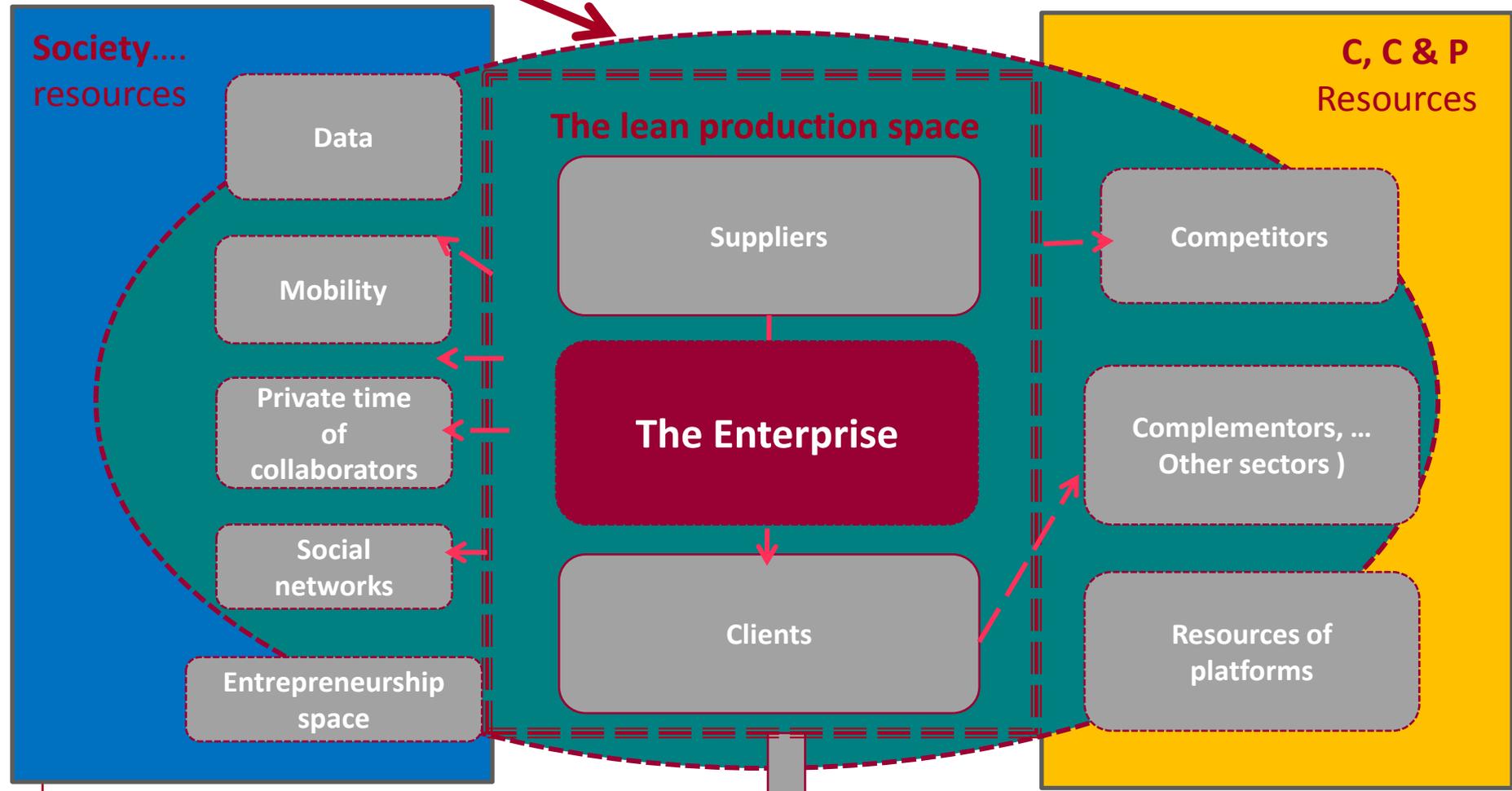
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**The 2020 enterprise:
its value creation spaces and underlying tensions**



4.1. The 2020 enterprise: its value creation spaces

The Accelulation space



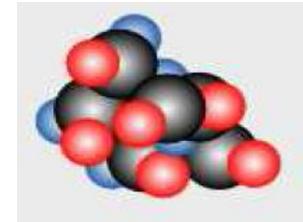
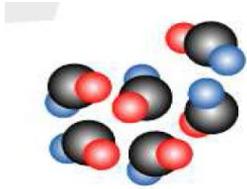
A new production mode where digital resources play a critical role

4.2. The Liquid enterprise and digitality

- **Congruence and preeminence of social changes**
 - **From liquid society to liquid enterprise**
-> Generation Y as an illustration
 - **Liquid enterprise and digitality**
 - **Liquid enterprise, Liquid management**
 - **Liquid enterprise and organisational design**
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4.2 -The 2020 enterprise:

A space of tensions



Regime of Liquidity		Regime of solidity
Liquidity/Plasticity (volatility)	←————→	Solidity/Organicity
Mobility	←————→	Fixity
Market resources / Platforms resources	←————→	Specific Resources
Instability of roles /mobility of resources	←————→	Stability of roles/fixity of resources
Short time-span /finited space	←————→	Long time, space to be built
Horizontality (collaboration, incitation)	←————→	Verticality (order)

4.3 -The 2020 enterprise:

A space of tensions

UNDERLYING TENSIONS	CONCRETE MANAGEMENT SITUATIONS
<ul style="list-style-type: none"> • MOBILITY / FIXITY 	<ul style="list-style-type: none"> • What business models for mobile uses in the enterprise? • How can we turn mobility into an effective front office? • How do we redeploy staff from fixed-status tasks to mobile statuses? • What are the appropriate coordination mechanisms?
<ul style="list-style-type: none"> • MARKET RESOURCES / PLATFORM RESOURCES / OWN RESOURCES 	<ul style="list-style-type: none"> • How do we make trade-offs between own investments (legacy, internal teams) and market resources (cloud, etc.)? • How do we manage the question of intellectual property rights and digital assets (proprietary rights, shared rights)? • How do we deploy digital platforms, and how do we manage the data issue? • How can we integrate external spaces (social networks)? • How do we handle the question of joint resources (including employees)?
<ul style="list-style-type: none"> • UNSTABLE ROLES, MOBILE RESOURCES / STABLE ROLES, FIXED RESOURCES 	<ul style="list-style-type: none"> • In partner relationships (customer, suppliers, etc.) how do we assess the stability of roles and statuses (will customers always be customers)? • What stability is there for investments, and so for the return on investment for resources allocated to our customers and partners?

4.3 -The 2020 enterprise:

A space of tensions

UNDERLYING TENSIONS	CONCRETE MANAGEMENT SITUATIONS
<ul style="list-style-type: none"> • SHORT TIMESPANS, FINITE SPACE / LONG TIMESPANS, NEW SPACE TO BUILD 	<ul style="list-style-type: none"> • What is the timespan of the company's activities (R&D, design, innovation)? If the timespan is short, which particular tensions need to be identified? What coordination mechanisms should we deploy? • What is the (short-term) impact of acceleration on the company's working climate (stress, employment relations, etc.)?
<ul style="list-style-type: none"> • HORIZONTALITY-COLLABORATION / VERTICALITY-ORDER-HIERARCHY 	<ul style="list-style-type: none"> • What incentive systems for Generations C and Y? • How do we trade off between horizontality and verticality? What role can the central functions (general and functional departments) play? • What is the right incentive system? How do we define its control (time, task, and performance monitoring) and what adjustments are required? • How much tension is acceptable to our employees?



V-
Six Scenarios



V-Six scenarios

1 Polyspaces	2 Back to basics	3 Mesospaces
4 Platforms rule	5 Network abundance	6 Resistance to digital

V-Six scenarios

1 Polyspaces	2 Back to basics	3 Mesospaces
4 Platforms rule	5 Network abundance	6 Resistance to digital

1 – Polyspace

- Acceluction governs the development of links between multiple value creation spaces.
- The 2020 enterprise will have to select the types of links it needs to develop
- Open innovation practices, crowdsourcing, and the use of markets reach maturity.
- At the societal level, the current heterogeneity of norms and rules enables enterprises to capitalize on links with these spaces

V-Six scenarios

1 Polyspaces	2 Back to basics	3 Mesospaces
4 Platforms rule	5 Network abundance	6 Resistance to digital

2 – Back to basics

- In this scenario, the 2020 enterprise refocuses its activities internally.
- The practices of outsourcing, massive use of the Cloud, and more generally of the market, reach their limits,
- acceleration is expressed in two ways: internally, via the acceleration of business and management processes (R&D, innovation, IT...), and externally, via coordination with partners, the securing of market positions, and the development of the customer experience.

V-Six scenarios

1 Polyspaces	2 Back to basics	3 Mesospaces
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3 – Mesospaces

- The 2020 enterprise focuses its acceleration efforts on developing links between spaces of different statuses (networks, communities, territories, enterprises), often with a local or territorial base,
 - but sometimes with a global reach (such as large science campuses like Saclay).
 - These links are both transactional and organic. The variety of statuses and structures is a key dimension here.
-

V-Six scenarios

1 Polyspaces	2 Back to basics	3 Mesospaces
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4 – Platforms rule

- THIS SCENARIO STRESSES THE PLATFORM DIMENSION OF DIGITAL.
- THE 2020 ENTERPRISE FINDS ITS DIGITAL STRATEGY HEAVILY DEPENDENT ON ITS OWN PLATFORM STRATEGY, AS WELL AS ON ITS LINKS WITH THE MAJOR DIGITAL PLATFORMS, WHICH DOMINATE AND CAPTURE THE LION'S SHARE OF THE VALUE CREATED.
- INNOVATIONS ARE ORGANIZED AND ARTICULATED AROUND THESE GLOBAL-SCALE PLATFORMS.
- THE PLATFORM STRUCTURE BECOMES THE HUB AROUND WHICH MOST DIGITAL ACTIVITIES ARE ORGANIZED. ACCELUTION PLAYS AN IMPORTANT ROLE HERE IN LINKS BETWEEN PLATFORMS AND THEIR CLIENT/PARTNERS, AS WELL AS WITH USERS (ESTABLISHING PROFILES, SERVICE OFFERINGS, ETC.).

V-Six scenarios

1 Polyspaces	2 Back to basics	3 Mesospaces
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5 – Network abundance

- Under this scenario, the 2020 enterprise harnesses the full potentialities of digital, notably through strong connection between physical and virtual spaces. This scenario assumes that all legal, social (privacy) and technical uncertainties have been resolved regarding the availability, circulation and monetization of data. It is in this scenario that accluction acquires its full meaning.
- Value is created by the acceleration of links between physical objects and virtual spaces, between different business data (proprietary, joint, non-proprietary), and between (and within) businesses. The digital spaces thus defined become essential levers of digital transformation. By leveraging network abundance, enterprises amplify the growth of their business.

V-Six scenarios

1 Polyspaces	2 Back to basics	3 Mesospace s
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6 – Resistance to digital

This scenario assumes a kind of social boycott of digital uses, or at least a certain form of data-centric digital use, leading large sections of society to reject it. By resistance we mean here heightened vigilance about the use of personal or work-related data in contexts where there are few controls. On top of this there is, at the international level, serious fragmentation of the legal framework, creating uncertainty that prevents uniform use of data globally. Under this scenario, the 2020 enterprise develops a strategy attentive to the ethical dimensions of use and their effectiveness. It co-constructs solutions with users, and shares the rent with them transparently. It also develops vigilance mechanisms on intellectual property aspects, in a fragmented legal context.

VI-Beyond 2020 : challenges and policy issues

1-Managerial issues related to post-2020 digitality

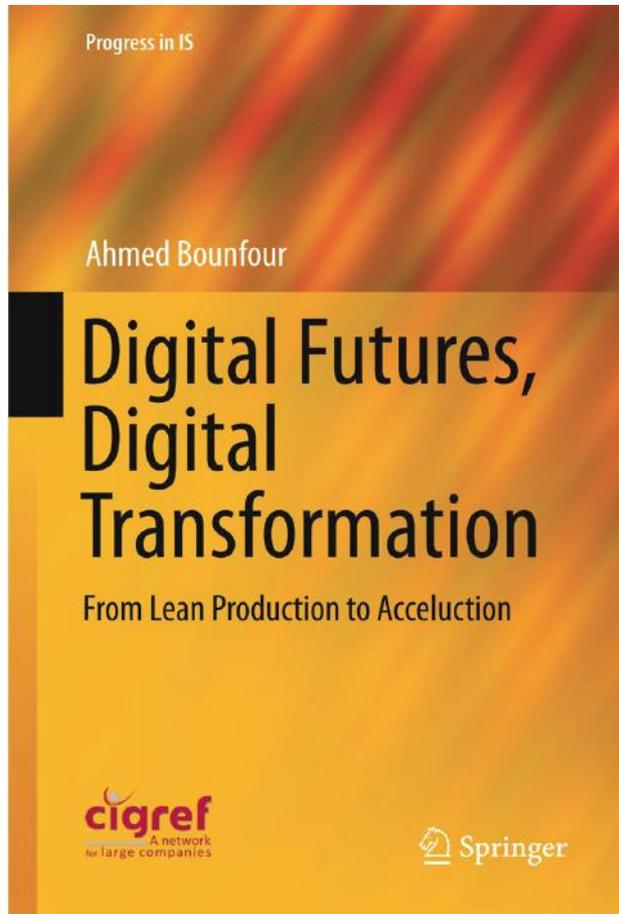
- The question of decision making
 - The question of the real time
 - The need for specialised skills
 - The issue of organisational design
-

VI-Beyond 2020 : challenges and policy issues

2-Societal issues related to post-2020 digitality

- The status of employment and job opportunities
 - Forms of social interaction
 - Intangibility and digitality
 - The issues of platforms (US vers China)
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Digital Futures, Digital transformation by Ahmed Bounfour



Thank you for your attention

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