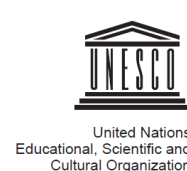




ic



Intellectual
Capital for
Communities
In the
Knowledge
Economy



Information for All
Programme

Data, Digital assets and Platforms for innovation

The World Conference on Intellectual Capital for Communities

12th Edition

Organised by
The European Chair on Intellectual Capital, the University Paris-Sud

July 12 & 13

With a Regional Focus :

AFRICA



AGENCE NATIONALE DE LA RECHERCHE
ANR



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le numérique



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de la Société Numérique
université PARIS-SACLAY



Venue : UNESCO Headquarters,
7, Place de Fontenoy, 75007, Paris,
(Rooms IV & 8)

PRESENTATION

The central theme of the 12th Edition of the World Intellectual Capital (IC) Conference is **“data, digital assets and platforms”**. Given the ubiquity of digitality within and around firms and organizations, the scope and scale of the debate on IT value creation has changed dramatically. It no longer concerns the level of investment in specific, identified and localized IT functions, instead it is about investing in a new source of growth and defining its control modalities: data. A recent report by OECD highlights that the market for data analytics is already substantial, and anticipates that globally it will grow from USD 3 billion in 2010 to USD 17 billion in 2015 (OECD, 2014). It also considers the significant challenges posed by data leveraging for economies, in terms of both demand and supply. From the demand side, the major issues relate to the development of skills and organizational change within the firm, a point that was highlighted in the discussion of organizational design (Galbraith, 2013). Supply side issues relate to investment in broadband, data access, and cloud computing. Finally, from the societal point of view, the major issues relate to market concentration, loss of autonomy and freedom, security, inequality and change in job markets. The stakes and opportunities for data-driven societies appear to be very high. An important question relates to how firms can take advantage of these changes. There is a need to develop frameworks and tools that can assess the potential for data-driven innovation and value creation.

Data and value creation

In many firms and organizations, data are considered to be an essential lever for digital transformation and value creation, now and in the next decade. Recent research has underlined the importance and superiority of data-driven decisions for performance. The importance of data also relates to emerging production systems, particularly platforms, which have been greatly facilitated by the generative nature of the digital revolution. Moreover, in an accelerating world, the real-time use of data becomes a key variable for decision making. Finally, social networks have generated huge quantities of unstructured data that companies, in general, make no use of.

Why think in terms of digital assets?

One of the central challenges for managers lies in the evaluation of data as a digital asset, and therefore in the assessment of its economic value generally. There is a need to shift the narrow focus on data to reasoning in terms of digital assets. We should underline here that an asset is a resource controlled by a company via specific property rights. Data is a digital resource that can be seen as a joint asset (i.e. something that is, or can be shared with others); hence the importance of analyzing its status in terms of control, potential value creation, and risk.

The issue of connecting revenue to data

In the digital economy, linking data to revenue generation is a major issue. As an intangible resource, data must be bundled to ensure revenue generation. This process necessitates the definition of an overall strategy for data pricing and value generation: for example, can it be sold to external partners in a specific format? Or should it be leveraged by the firm itself in targeted marketing strategies? Or can both options be adopted? In any case, policies and programs need to be clarified at this level, with clear guidelines and principles regarding privacy, and more generally ethical use.

Data, intellectual property and the specificity of digital

Questions of data and intellectual property are central to the agenda of enterprises, public policy-makers and society in general. Data raises issues of law, security, privacy and use, from the viewpoint

of value creation. Moreover, the mobility of data can usefully be tied in with questions about the specific nature of digital as a production system radically different to previously identified systems. The ISD program by CIGREF formulates three propositions¹.

1. 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
2. Digital is a generative machine that produces spontaneous, unexpected innovations, often contributed by external developers
3. 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)

Organizational design: an issue for renewal

Digitality and the various layers of transformation highlight the issue of organizational design as a topic for researchers and practitioners, particularly in the domains of organizational science and economics. In this context, organizational design refers to how firms conceptualize and effectively articulate tangible, financial and intangible resources. In the domain of organizational economics, the issue has been considered in terms of the firm's boundaries: transactional cost economics has developed an elegant framework for understanding the trade-off between markets and hierarchies. On the other hand, organizational science explains the existence of organizations in terms of their fundamentals, notably the importance of aggregating and developing skills in a very specific organizational setting, the reduction of uncertainty stemming from the environment and technology, and more generally, information complexity.

This shows the two approaches to organizational design: on the hand, organizational boundaries depend on optimizing transactions, and on the other hand, organizations exist because of their intrinsic characteristics—idiosyncratic skills and administrative processes put in place to deal with uncertainties and information complexity.

Digital space and data

The ubiquity of digitality and the resulting massive explosion of data are challenging the way firms and organizations can benefit. The issue of 'big data' is important because of its quantity, lack of structure, and real-time nature. Organizations that want to take advantage of big data need to implement embedded processes, which creates a power shift and therefore resistance to change. Galbraith (2014: 3) quotes the case of Procter & Gamble, which established an analytical group in 1992; this eased the adoption of big data analytics and led to the development of new skills. Implementing the same procedures in other contexts can lead to problems as it can create a shift in power between specific functions or activities, although this may be exactly what is needed to embed data analytics into organizational processes. Organizational culture and processes are therefore important elements to take into account when considering firms' readiness. One solution may lie in the transformation of organizations, from command-and-control hierarchies towards self-organizing structures that empower staff at all levels. Another option might consist in considering data as a transversal issue that is seen as a core asset for the whole organization.

Platforms rule as the dominant scenario for the near future?

This scenario posits the reinforcement of the current oligopolistic structure of the digital market around a small number of players. Globally, we are witnessing a bipolarization of digital

¹ Ahmed Bounfour, *Digital Futures, Digital Transformation : from Lean production to Acceluction*, Springer, 2015

infrastructures, into a Western pole, dominated by the USA, with a handful of players (Google, Facebook, major Cloud operators and the like), and an Asian pole dominated by China. Platform-based structures are developing around “natural monopolies” whose market power is being reinforced partly by the generative character of digital technology and partly by the market power of the incumbent operators, who have sufficient financial resources to enable them to internalize any threat of external innovation from any entrepreneur. Under this scenario, neither the competition rules (notably in Europe), nor social norms and values (use of personal data) can prevent the big players from enhancing their present positions.

The *IC for Communities* conference series have discussed some of these issues in their earlier editions. However, they are the focus of IC 12, which looks at them from different angles: geographical (Asia, Europe, North and South America, and Africa), institutional (large companies, large international institutions, small firms) and professional (scholars, policy and private sector decision-makers).

We propose a set of themes that we consider to be highly relevant for decision-making:

- **Approaches for value creation and public investment in platforms for innovation.** How to invest in platforms? How to identify emerging startups ? What rationale for public investment in early-stage? All these questions are on the agenda on public decision makers, especially for large public institutions in charge of long term investment.
- **Modeling and valuing data as digital assets.** How concretely to modelize value creation as a data driven process, beyond the general discourse on big data? Are there relevant practices to be shared? Is there a potential for developing a common language (and possibly standards) for data driven value creation? Are the approaches necessarily sectoral or organizational specific? What governance structure and rules to be considered and implemented?
- **Analyzing platforms and hybrid organizations.** The hybridation of resources is accelerated by the critical role of data. This is clear in the case of digital platforms (Gafa and alike) where this is a market power around which innovations are concentrated and organized. But this also the case for hybrid organizations with a mix of private and public resources or market and non market oriented organizations. Beyond establishing typologies of such organizing forms, we need to document further their governance structure and processes, and the impact of innovation capabilities and sustainability of ecosystems and the society in general.
- **Data and Cloud computing business models.** Cloud computing emerged as a new form of organizational design. What are its determining factors? What types of "organizational fits" (structure, culture, processes,) to be put forward? How data intervene in value creation processes and design for cloud computing?
- **Intangibility and digitality.** The question here relates to the type of exchange instruments used by people, especially in a context where acceluction becomes a major production system. Due to the multiplicity of spaces for value creation and the ubiquity of digitality, we can expect exchange and social interaction to become organized along intangibles such as brands, data, and reputation. We can also expect traditional forms of knowledge to become digitized and therefore more easily disseminated worldwide (an example is the way the Massai café, as community product, has been branded). At the global level, we can expect to see the emergence of collective goods such as collective brands, or collective knowledge that is relevant to specific communities and is widely disseminated via digital artifacts. In this context, joint IPRs will become a major lever for knowledge dissemination. Finally, as can already be observed in many spaces, monetizable and non-monetizable assets will coexist in different value spaces (markets, networks, communities, territories).
- **Digitality and IPRs.** The emergence of the platformic enterprise if it paves the way for the joint intangibles phenomenon. This creates opportunities for innovation, but also poses

important problems in terms IPRs frameworks and practices. Furthermore, development of practices such as counterfeiting challenges value of intangibles of large sectors of activities.

- **Intangibles complementarities.** The key issues here are related to the determination of criteria of success, based on observable bundles of intangibles (e.g. digital versus organisational), the way public and private intangibles complement each other and the relative contingency factors ; This will help formulating policy recommendations on how to allocate and monitor public resources.
- **Organisational forms for the future.** This is a transversal issue. By looking at the organising, can we identify new types of relevant intangibles? What issues related to their monitoring and management? What new policy instruments are needed?
- **The status of large enterprises.** As Chandler underlined, the large enterprise emerged from the need to internalize and diversify activities. In the context of the generalization of digitality, what does the future hold for them? Will they remain the final step in the growth of a company? Or will we see more ecosystemic forms of organizing, where small firms play a critical role? How will “micromultinationals” (described by Hal Varian), ecosystems and digital platforms interact? All of these questions remain unanswered.
- **The status of entrepreneurship.** How to characterize entrepreneurship under the accelerated regime? What are its value creation spaces? What implications for start-ups? How entrepreneurs can leverage intangible assets under the accelerated regime?

This year, following the success of IC8 (South Korea), IC9 (the Mediterranean), IC10 (Brazil), IC11 (China), we focus on a promising continent: **Africa**.

As at former IC conferences, these questions are addressed at various levels: countries, regions and territories, cities, firms and networks. Similarly, as before the conference alternates plenary sessions with keynote speeches and parallel workshops. This structure allows time for more detailed discussions on the various topics of interest to the different IC communities.

Day 1 – Tuesday July 12, 2015
8.15 – 8.45 am: Welcome Coffee, Registration 8.50-9.00 am Welcome address : Chafica HADDAD , Chair, IFAP, UNESCO
<p>Session 1:</p> <p>Designing the digital futures:</p> <p>Breakthrough technologies and challenges</p> <p>9.00 - 11.00</p> <ul style="list-style-type: none"> • “Digitization and information for all: challenges for the future”, Paul Hector, IFAP programme, UNESCO • “Open science and innovation”, Dominique Guellec, Direction for Science, Technology and Industry, OECD • “ The future of data science”, Balázs Kégl, Center for Data Science, University Paris-Saclay • “Breakthrough technologies and IPRs” (the WIPO report), Thomas Hoeren, University of Munster
Cafe Break – Networking 11.00 – 11.30

Session 2:

DIGITAL PLATFORMS, BUSINESS MODELLING AND THE POLICY AGENDA

11.30-13.15

- “ Digital platform and the European agenda”, **Martin Bailey** , European Commission, DG Connect
- “The next revolution in production systems”, **Alistair Nolan**, OECD
- “ The role of data for digital platforms: policy implications ”, **Christian Reimsbach-Kounatze**, [OECD \(on-line\)](#)
- “The BNDES programme for support to innovation and digital platforms: an u-pdate”, **Helena Tenorio Veiga de Almeida**, BNDES
- "The platformic firm under the accelucted regime", **Ahmed Bounfour**, University Paris-Sud

Lunch : 13.15 – 14.15

Session 3

KEY NOTE SPEECH:

14.15-15.00

“Digital transformation and the future of the automotive industry”
Celso Guiotoko , Renault Nissan, Alliance Global Vice-President, IS/IT

Session 4

DATA & DIGITAL TRANSFORMATION OF FIRMS, INSTITUTIONS & TERRITORIES

15.00-16.30

- “ Managing digital assets of UNESCO”, **Ingrid Regien**, CIO, UNESCO
- «Cyber-physical Twins – A fundamental pattern to implement digital transformation”, **Andreas Riegg** , Daimler
- « Data and digital transformation of large companies », **Régis Delayat**, Vice-President, CIGREF, CIO, SCOR
- “IPRs and digitization”, **Laurence Joly**, INPI

COFFEE-BREAK: 16.30-16.45

Session 5:

INTELLECTUAL CAPITAL AND THE FUTURE OF AFRICA

16.45-18.30

- “ Casablanca as a future IP platform”, **Nour-Eddine BOUKHAROUAA**, OMPIC
- “How African Development Bank support to leverage intellectual capital of Africa”, **Dr. Abdul-Karim Bakri**, African Development Bank
- “Empowering and leveraging young African women in IT and entrepreneurship”, **Davide Storti**, Knowledge Societies Division, UNESCO
- “An econophysics approach to leveraging intellectual capital: Micro-Finance in Sub Saharan Africa: The Cases of M-Pesa in Kenya and South Africa”, **Dr Wolfgang Baeer**, CEO of Nascent, **Dr Thomas Housel**

Day 2 - Wednesday: July 13, 2016

SESSION 6

KEY NOTE SPEECH:

Strengthening open access and the public domain:
Indrajit Banerjee, Director, Knowledge Society Division, UNESCO
Discussant: **Mario Cervantes**, OECD
9.00-9.30

Session 7:

DIGITAL FUTURES OF AFRICA

9.30-11.15

- “Digital transformation of African Large firms:” **Mohamed SAAD**, CIO, Bourse de Casablanca, President, AUSIM
- “ICT potential development in Africa”, Dr **Foster Ofofu** , African Development Bank Group
- “Entrepreneurship opportunities in Africa, the case of HPS Morocco”, **Mohamed Horani**, Chairman & CEO, HPS
- “Innovation capabilities in digital : the case of Orange Kenya” , **Arnauld Blondet**, Vice-president, Africa & Middle East, **Orange**
- “Data as a source of innovation”, **Prasanna Lal Das**, Lead KM Officer(Data), The World Bank

Cafe Break - Networking

11.15 - 11.30

Session 8 : 11.30 – 13.00

INTANGIBLES OF NATIONS, INSTITUTIONS AND TERRITORIES

- “Public sector intangibles and the territorial growth”, **Kristof De Meulder**, APIE
- “Digitization of museums” , **Julien Anfruns**, Conseil d’Etat
- “Site selection according to life cycles in agglomeration areas: A dynamic and interdisciplinary location analysis of the four-country-region Lake Constance-Alpine Rhine Valley””, **Stefan Gueldenberg**, University of Liechtenstein.
- “Intellectual capital of Luxembourg”, **Susan Alexander**, **Sylvain Cotton**, Luxlc
- “Diagnosing nations’ wealth potential: theories and implications, **José M. Viedma Marti**, Polytechnic University of Catalonia

Session 9: DATA, CLOUD COMPUTING & ORGANISATIONAL DESIGN

11.30 – 13.00

- “Adoption of Cloud Computing in Tunisia Firms: the role of absorptive capacity”, **Adel Ben Youssef**, University of Sophia-Antipolis
- “Modelling Cloud computing organizational options”, **Alessandro Solimano**, **Ioana Manolescu**, **Emmanuel Waller**, INRIA, Paris-Saclay
- “ Business models for Mobile Cloud”, **Jacques Abu Abdo**, Notre Dame University,
- “Cloud-computing and governance issues”, **Sabine Khalil**, **Valérie Fernandez** , TelecomParistech
- “Cloud-computing and decision-making”, **Xiaolin Cheng**, University Paris-Sud

Lunch Break

13.00– 14.15

Session 10

INTANGIBLES, DATA AND THE MEASUREMENT ISSUE :

WHAT SHOULD BE THE NEXT STEPS

14.15-15.45

- “Wici framework and the future of IC reporting”, **Stefano Zambon**, University of Ferrara & Chairman, WICI Global
- “WICI - Japan : a sustainable progress ” , Yasuhito Hanado, **Waseda University**
- Integrated reporting: An overview of Japanese firms practices, **Yoshiko Shibasaka**, KPMG Japan (on-line, tbc)
- Intangibles & risk management, **Susanne Durst**, University of Skovde

End of the conference, Concluding remarks

15.45 – 16.00

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