

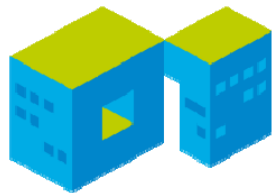


BIM deployment strategy in France and Europe

Dr Souheil SOUBRA
Director IT Department - CSTB



I. Digital transition Plan for Buildings



**Plan Transition Numérique
dans le Bâtiment**

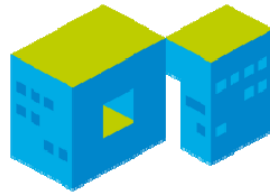


II. Activities of EU BIM Task Group

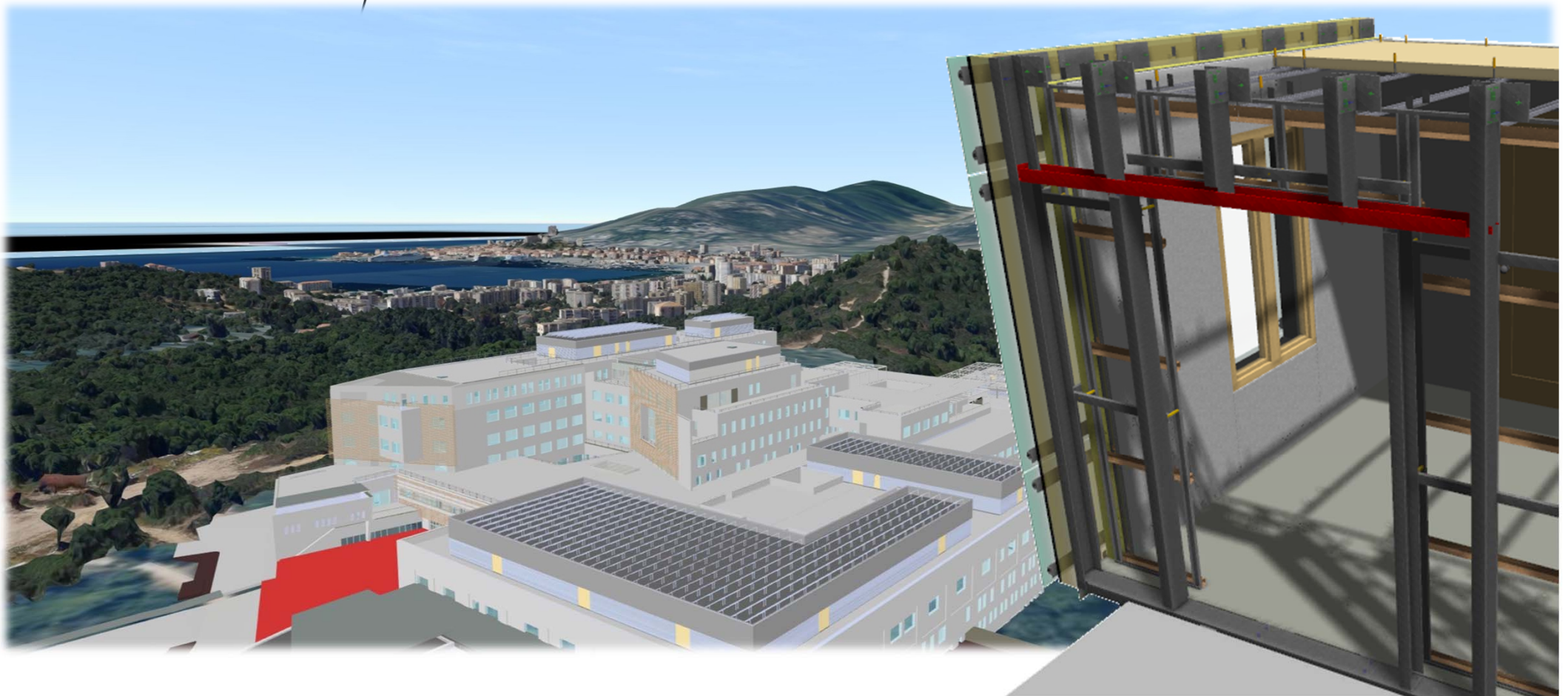


Digital transition Plan for Buildings

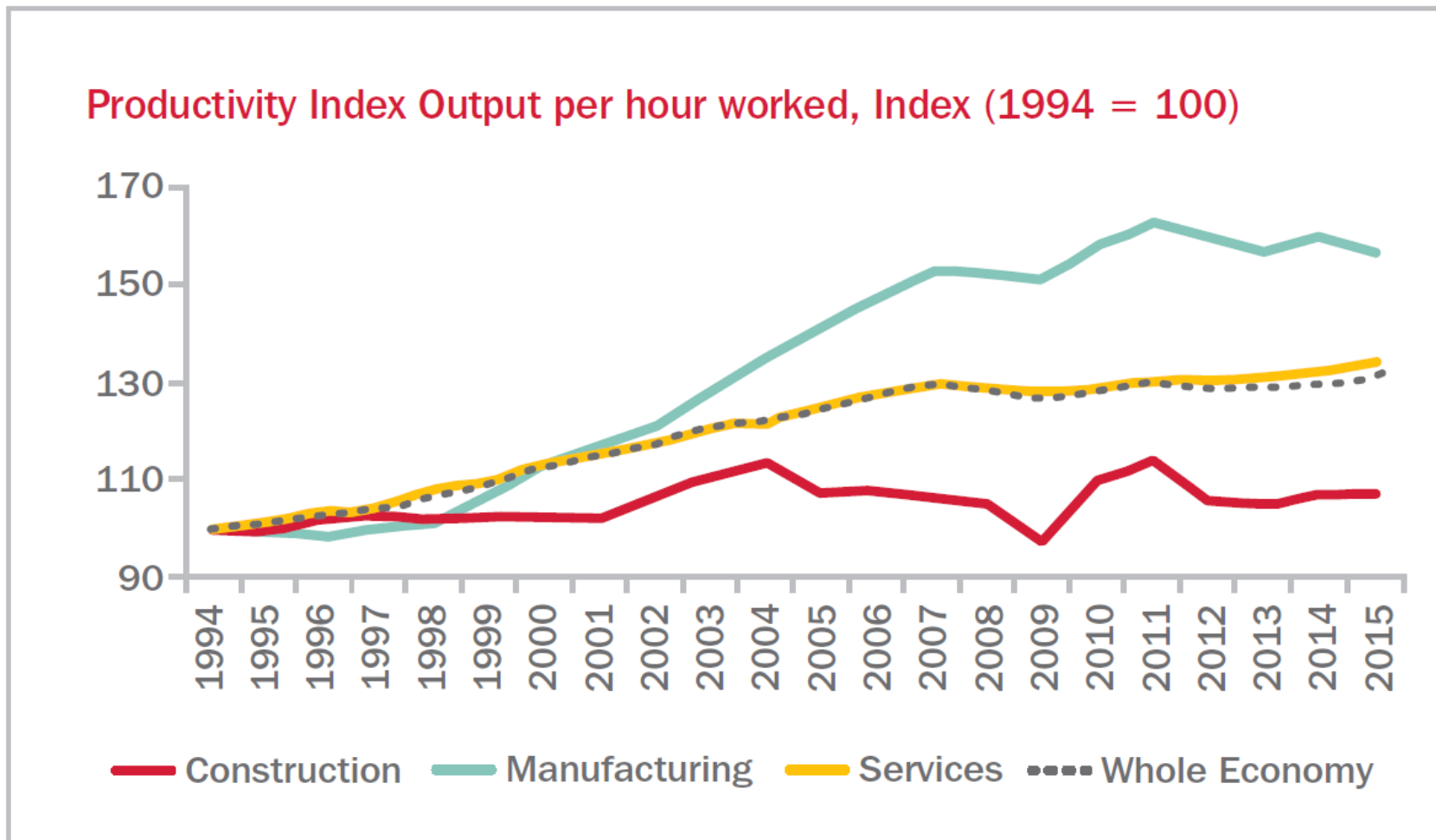
CSTB
le futur en construction



**Plan Transition Numérique
dans le Bâtiment**



ONS Labour Productivity, Q4 2015. Table 1 and 8. April 2016.



Construction productivity

“

Looking at construction projects today, I do not see much difference in the execution of the work in comparison to 50 years ago.

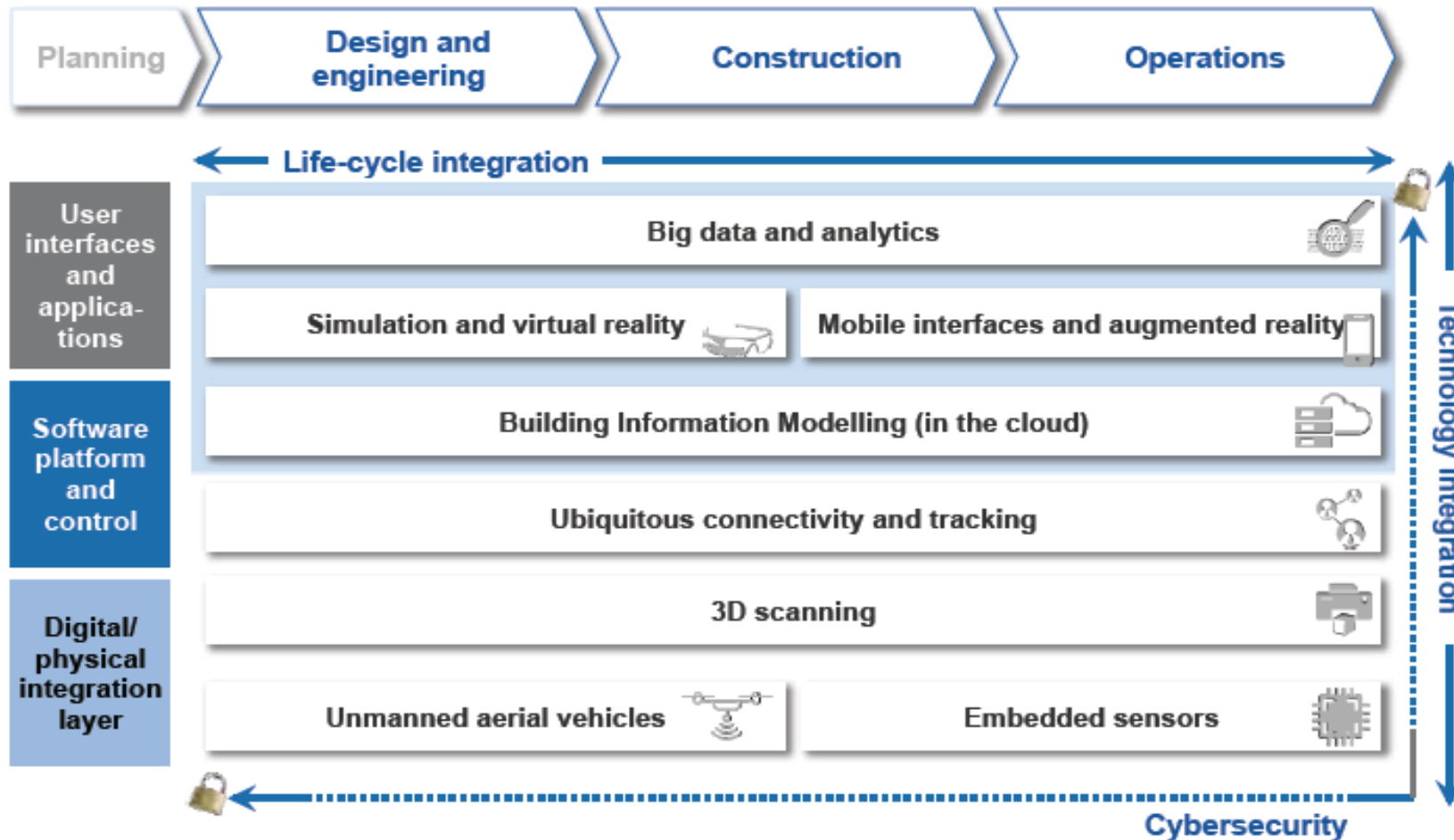
”

John M. Beck, Executive Chairman, Aecon Group, Canada



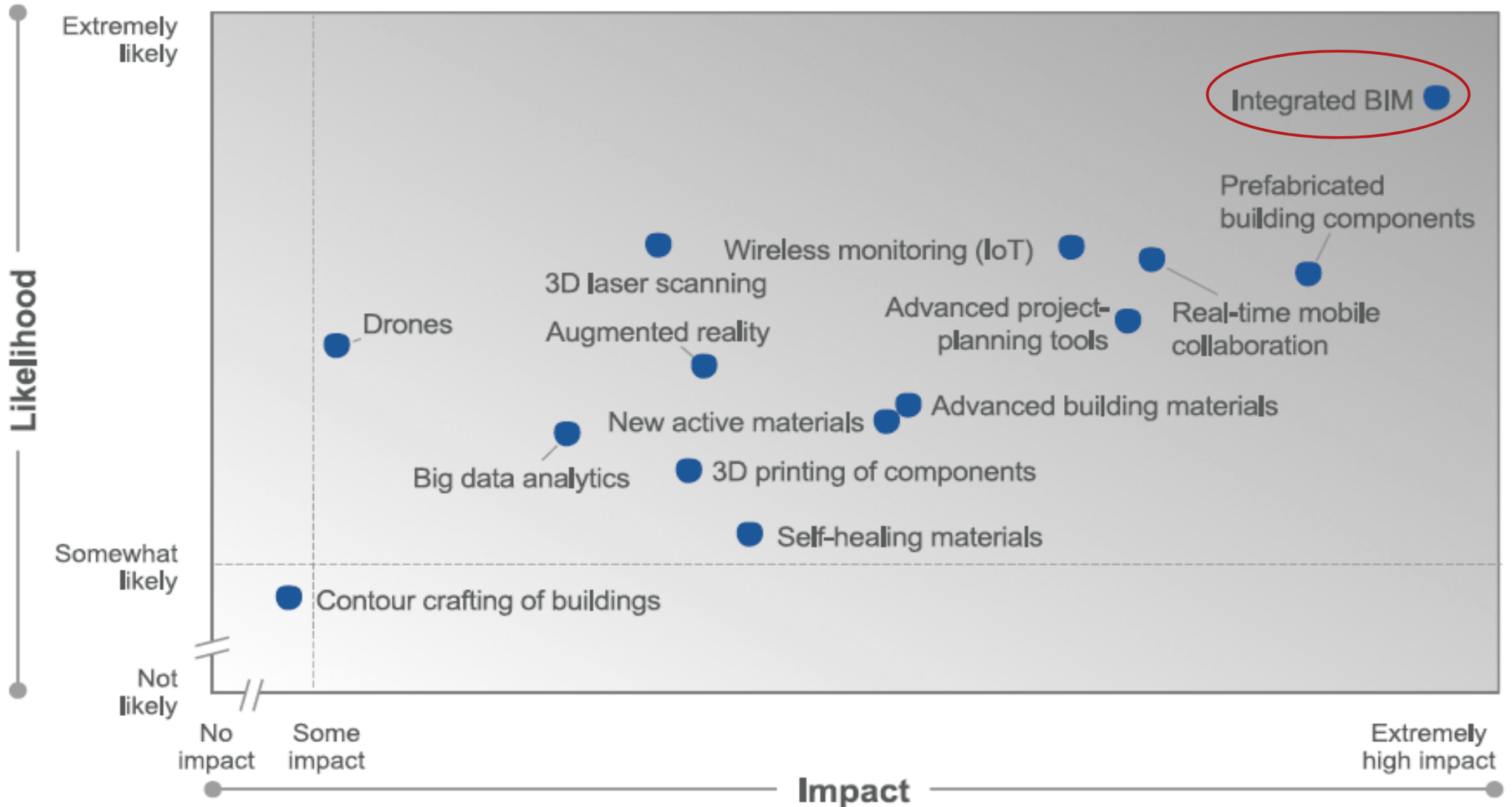
Digital technologies

Digital Technologies Applied in the E&C Value Chain⁴⁸



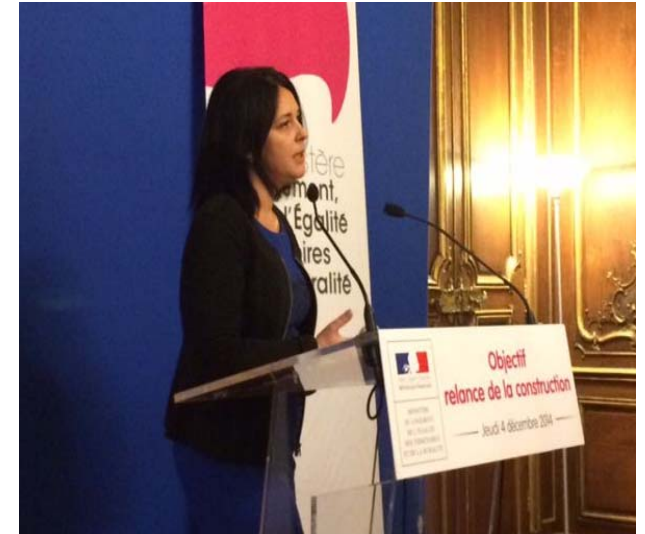
Impact / Likelihood analysis

Impact-likelihood matrix of new technologies



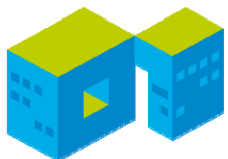
Launch of the Digital Transition Plan

- On December 10th 2014, the Minister of housing Sylvia Pinel announced the launch of the Digital Transition Plan in order to accelerate the deployment of digital tools within the construction industry
- 4 years budget of **20 M€**
- Discussions are on-going about a follow up plan called “BIM 2022”



Questions to address

- What is the impact of BIM on the value chain ? What are the estimated costs? What are the benefits (cost reduction, quality, delivery time)?
- How to support public procurers in the integration of BIM in public procurement?
- How to support SMEs technically, financially and through training?
- How to adjust responsibilities and financial aspects?
- How to support French digital actors (through standardization, software development, ...)?



Plan Priorities

1. Convincing and inspiring all stakeholders, especially project owners
2. Responding to stakeholders needs for equipment and improved digital skills, particularly among SMEs and micro-businesses
3. Developing a trusted digital ecosystem
 - encouraging standardization work in order to facilitate the interoperability of software
 - standardized access to information on materials, products and systems.



The organisation

- A **steering committee** (Government representatives and Professional Organizations) declines strategic axes into an operational roadmap
- The steering committee is supported by a **technical committee** (stakeholders representatives and experts) responsible for producing the technical, legal and financial response to needs expressed by the Steering Committee
- The technical committee is led by a **technical secretariat**
- The technical committee sets up **working groups** to develop specifications used to consult **providers**



Some Significant Results



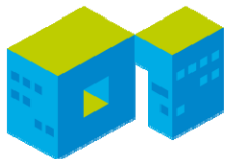
80
Projects



RETOUR D'EXPÉRIENCES

PHASES CONCEPTION

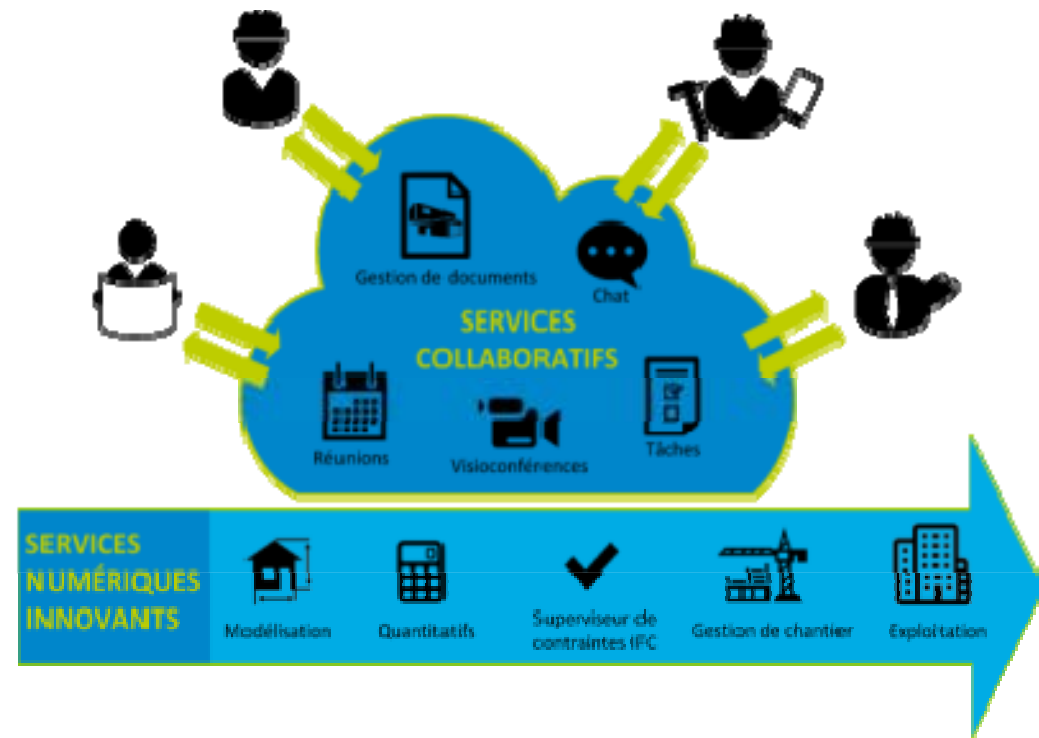
De l'équipe de maîtrise d'œuvre



Plan Transition Numérique
dans le Bâtiment

Some Significant Results

A BIM Collaborative platform for SME



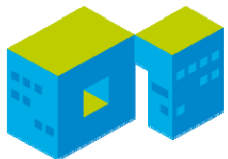
Some Significant Results

| N° | Bâtiment | Acteur du bâtiment | Domaine technico réglementaire |
|----|--------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------|
| 1 | Logement collectif | Entreprises | Acoustique – bruit d'impact |
| 2 | Maison individuelle | Architectes | Référentiel énergie carbone |
| 3 | ERP 5 ^{ème} catégorie | Architectes | Accessibilité – Circulations intérieures horizontales |
| 4 | Logement collectif | Entreprises | DTU 25.41 / 25.42 Cloisons en plâtre |
| 5 | ERP 5 ^{ème} catégorie | Entreprises | Sécurité incendie – Construction, dégagement gaine – Aménagements intérieurs – Désenfumage – Moyen de secours |



A Study on

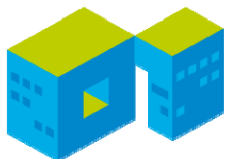
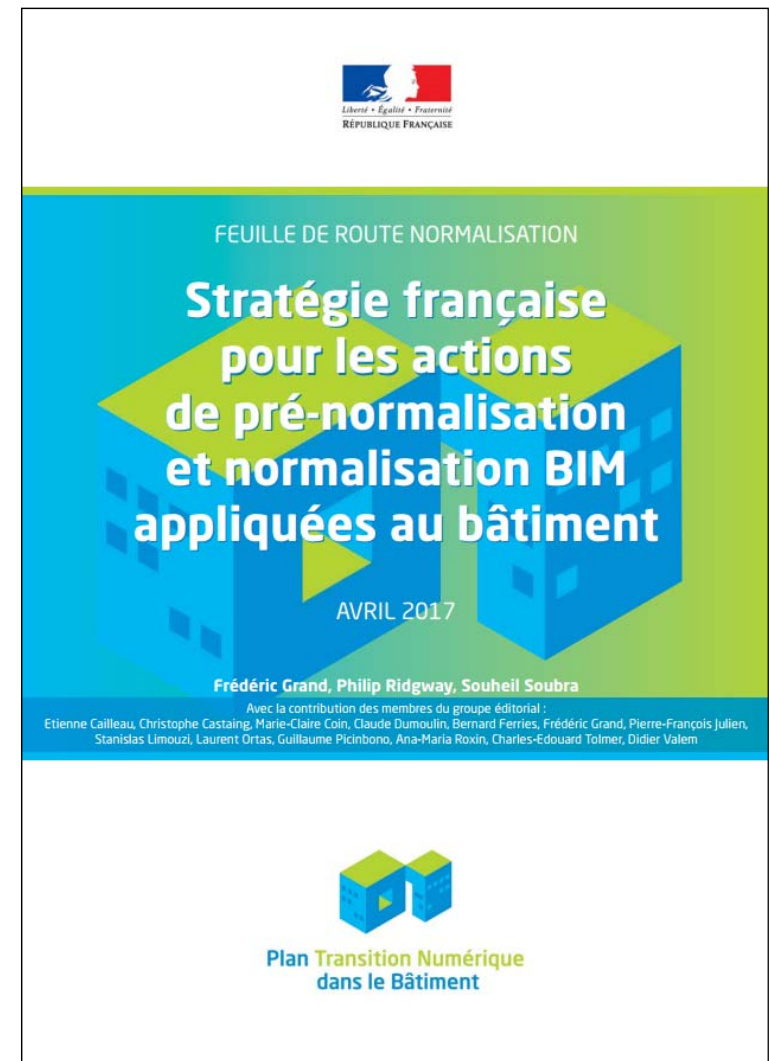
« Digitalisation of Construction Regulation »



Plan Transition Numérique
dans le Bâtiment

Some Significant Results

A french roadmap for
standardisation actions



**Plan Transition Numérique
dans le Bâtiment**

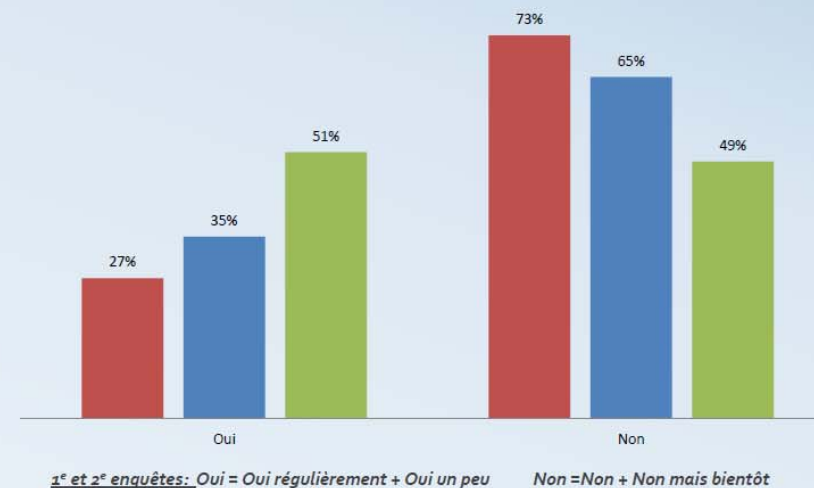
Annual survey shows significant progress in the use of BIM:
51% of professionals started to use BIM:



Avez-vous recours, actuellement, à des outils numériques et éventuellement à une démarche BIM dans vos projet de construction ?

Résultat global

■ 1e enquête ■ 2e enquête ■ 3e enquête

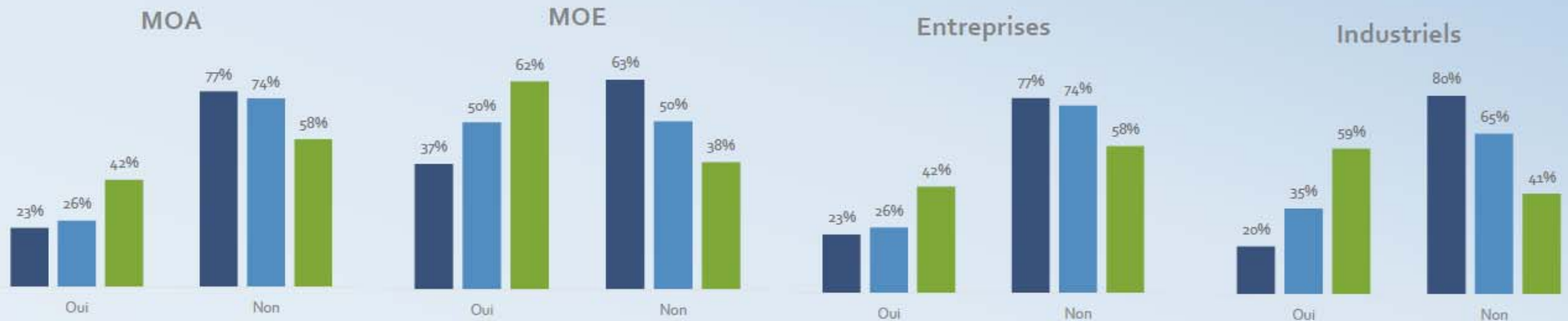


Le % de professionnels utilisant le BIM est en nette progression (+ 16 points vs 2^e enquête)

Results by stakeholder type

Avez-vous recours, actuellement, à des outils numériques et éventuellement à une démarche BIM dans vos projet de construction ?

Résultat par segments



1^e et 2^e enquêtes: Oui = Oui régulièrement + Oui un peu Non = Non + Non mais bientôt

+ 16 pts pour la MOA et les entreprises par rapport à la dernière enquête

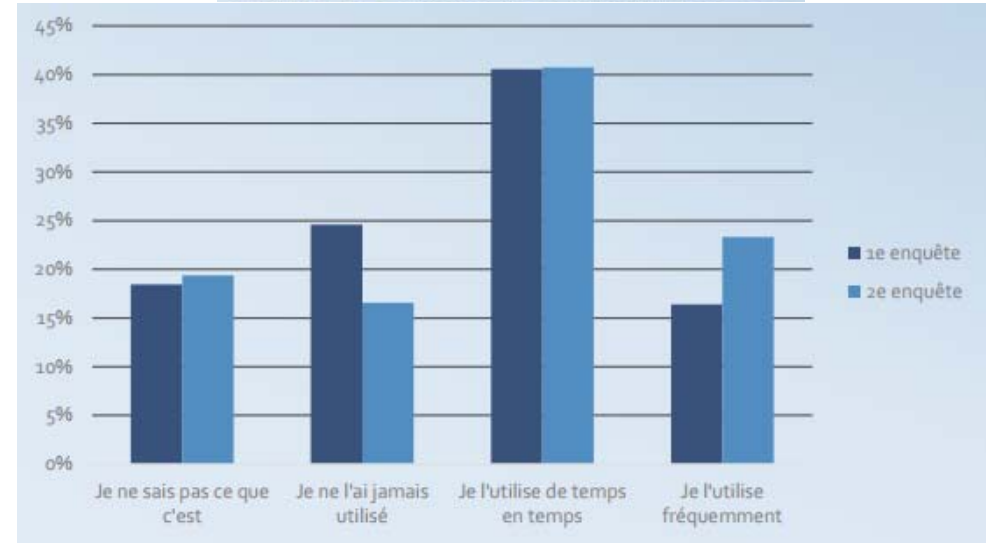
+24 pts pour les industriels

+12 pts pour la MOE

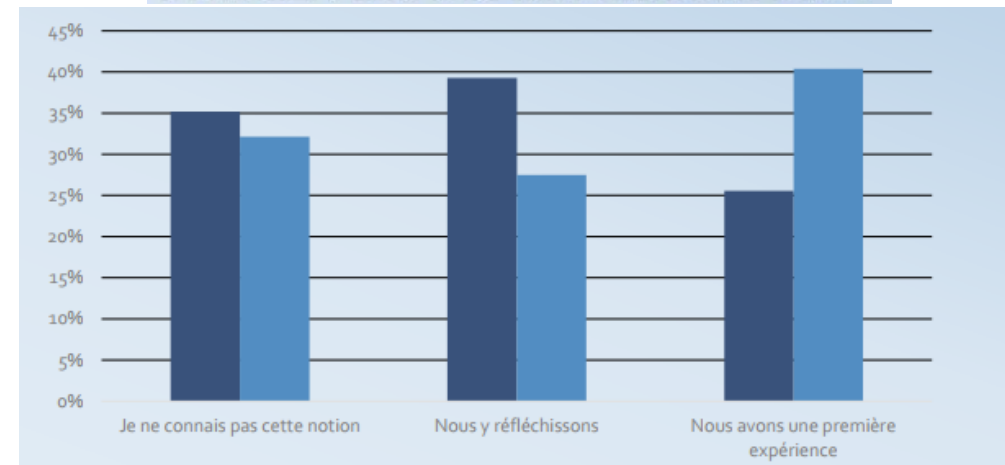
What kind of use ?

1. Open standards (IFC): 65%
(others : never or don't know what it is)
2. Collaborative Platforms: 55%
+7%
3. BIM Execution Plans:
40% have a first experience
27% are preparing one
+14% improvement over last year

Utilisez-vous le format IFC ?



Utilisez-vous des conventions BIM ?





Bringing together national efforts into a common and aligned European approach to develop a world-class digital construction sector



Presentation video

EU BIM Task Group



Scope: A European group of public stakeholders which brings together the purchasing power, collective expertise and leadership of public clients and public authorities to

Bridge the gap between demand side, supply side and enablers (including standardization and innovation)



Demand side

- **Public authorities (and EC)**
- **Public procurers**



EU BIM TG



Enablers

(CEN, ISO, bSI, OGC, ...)



**Supply side -
Construction
lifecycle sector**

The EU BIM Task Group

- 2-year program co-funded by the EU Commission, started Feb 2016
- Create a Common Framework for BIM in public works
- Handbook, Video, Website and Conferences



Target Groups

- EU Public estate owners
- EU Public procurers
- EU Policy makers





Austria
Belgium
Czech Republic
Croatia
Germany
Denmark
Estonia
Finland
France
Iceland
Ireland
Italy



Lithuania
Luxembourg
Netherlands
Norway
Poland
Portugal
Slovakia
Slovenia
Spain
Sweden
UK



Rapidly evolving national digital programmes



| | | | |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Germany |  <p>Bundesministerium für Verkehr und digitale Infrastruktur</p> | Norway |  <p>STATSBYGG</p> |
| Finland |  <p>Sennatti</p> | Spain |  <p>ES BIM Implantación del BIM en España</p> |
| France |  <p>Plan Transition Numérique dans le Bâtiment</p> | UK |  <p>BiM Building Information Modelling (BIM) Task Group</p> |
| Netherlands |  <p>Rijkswaterstaat Ministry of Infrastructure and the Environment</p> | Denmark |  <p>BYGNINGSSTYRELSEN</p> |



Risks of not collaborating



Adding cost burden

Slowing economic growth

Confusing markets

Loosing opennes, fairness of markets

Entering a vendor looked-in situation

