

CS 464709

# New Business Models and Digital Platforms in Construction 4.0

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## Learning Objectives

- Discover the notion of Construction 4.0
- Discover the need for new business models to run firms in the future
- Discover a shape to the future state of the industry (originators, providers, aggregators, controllers, consumers)
- Learn how to create strategies for organizations to become more data driven

## Description

Digital transformation is more important than ever. Data and analytics change how architecture, engineering, and construction (AEC) firms operate. But some changes are invisible to the eye: transformation of business models. To avoid commoditization, some companies are moving fast to adopt digital platforms to run their business. They add new services to their existing portfolio and they build new partnerships. We see the emergence of new roles (chief data officer, chief digital officer, chief transformation officer, chief analytics officer, chief partnership officer), new activities (that focus on data capture and usage), and new tools (to make business decisions and develop insights based on data). As a consequence, entirely new ecosystems are emerging: the originators, the providers, the aggregators, the controllers, and the consumers. We will explore in more detail the various aspects of this new Construction 4.0 scene.

## Speaker(s)

Olivier Lépinoy belongs to the Autodesk Business Development team for the AEC industry. He is building and developing the conditions for Autodesk to be part of its clients' strategic initiatives. Olivier is an expert in strategies to help firms pivot and grow new businesses. He took part in multiple digital platform initiatives for the largest firms worldwide. His current focus is on helping firms explore and build New Business Models. With past experiences in architecture, at VINCI, at Accenture, and at IBM, Olivier has built an unparalleled career path across disciplines and business ecosystems. He is one of the co-authors of an acclaimed book about Construction 4.0: "Construction 4.0, An Innovation Platform for the Built Environment". Olivier Lépinoy holds two Master's Degrees: in Civil Engineering (Ecole Spéciale des Travaux Publics, Paris) and in Earthquake Engineering (UCLA, USA). He is also a licensed architect and an urban designer (Ecole d'Architecture de Versailles).

## New Business Models and Digital Platforms in Construction 4.0

### An Invisible Revolution.

This presentation is about an Invisible Revolution.

All pioneer AEC firms try to reinvent themselves: they collect data, they build their own digital platforms, they operate them with new business models, and they offer new services to their ecosystem.

This is an Invisible Revolution because things look unchanged. The most essential changes are changes in the way the industry is structured, not in the way buildings are built.



### The Nature of Innovation changed.

The AEC industry is changing in the very way it is structured and its services rendered. Technology is just a puzzle piece. True and sustainable innovation does not come from technology alone; it comes from new Business Models.

### The Nature of Disruption is changing.




Companies conquer new markets, they disrupt their competitors by creating digital platforms and by running their business with new business models.

### AEC already entered the Platform Economy.

Disruption already changed how the Telecom, Media, Retail, Transportation, Music, and Hospitality industries are structured. AEC is no exception. Companies deliver value and capture value by orchestrating networks. This industry is a platform industry already.

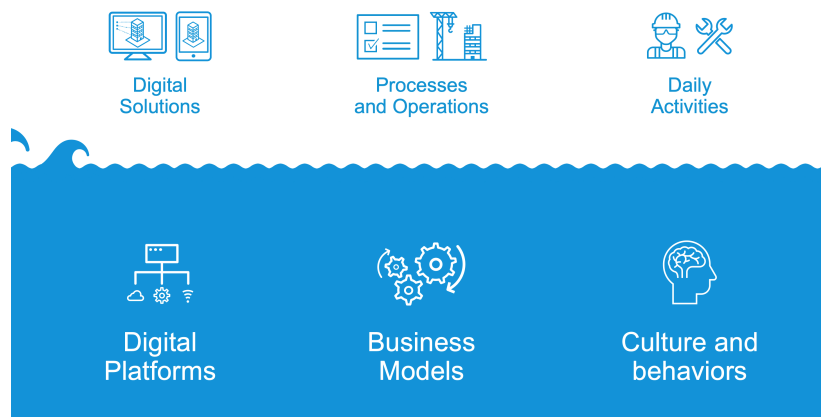
### Culture is at the centre of this Transformation.

Construction tends to be a late adopter to change. So, for the AEC industry, this new wave of transformation is also a cultural one. Moving to more data centricity is an huge cultural challenge.

-  The Nature of Innovation changed
-  The Nature of Disruption is changing
-  AEC already entered the Platform Economy
-  Culture is at the centre of this Transformation

### Digital Platforms, Business Models, and Culture.

This presentation is in 3 parts: Digital Platforms, Business Models, and Culture.



### The Arc of Transformation.

All of this is what we call the Arc of Transformation. It is also the name of a program we created to help some of our clients with their strategic initiatives, to help them address these key topics.



## Large AEC players are moving faster than it seems.

Large AEC players all launch strategic initiatives to improve their current market position, to build their future competitive advantage, and to prepare for the next wave of transformation. Most of the time, these strategic plans are kept confidential and are kept unknown to the general public.

We tend to describe this industry as slow and not so innovative. I show in this presentation that this is the exact opposite. Many great things are happening. The largest players are taking their destiny into their hands.

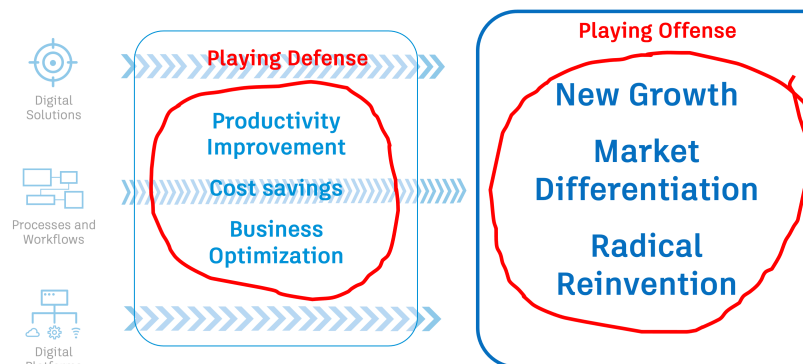
## Large AEC players are moving faster than it seems



## These large companies Play Defense and Play Offense as well.

There is a big difference between Playing Defense, working on your bottom-line agenda, and Playing Offense, working on your top line agenda. When you play Offense, you need to rethink your priorities and your efforts.

What happens is incumbent firms are conflicted. Their efforts lack of focus and prioritization. They suffer because they need to Play Offense and to Play Defense at the same time. Yet, there is no opposition between Playing Defense and Playing Offense. You have to execute both plays at the same time.

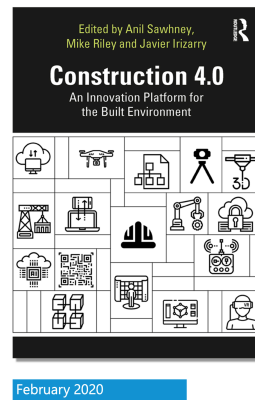




## The Future of Construction: Construction 4.0.

These moves have impacts on the way the whole industry is structured. The Future of Construction is a topic already explored in two initiatives I was part of: the Construction 4.0 book and the ENCORD foresight work.

### Construction 4.0



### ENCORD



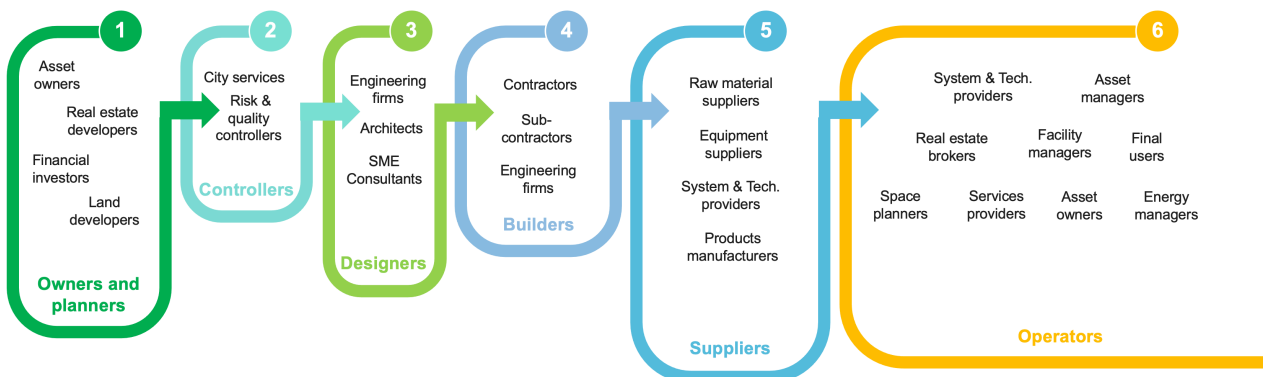
## The Shape of Things to Come.

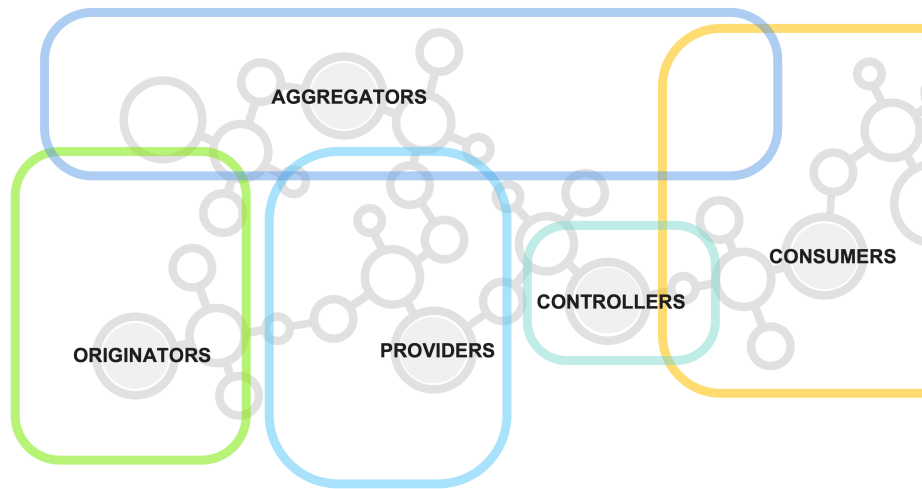
Based on our observations, here is what we can predict:

- Boundaries between silos and categories we know will progressively disappear.
- Hybrid players will gain importance.
- Diversification of Business Models will be the new normal.

The terms we use now is outdated.

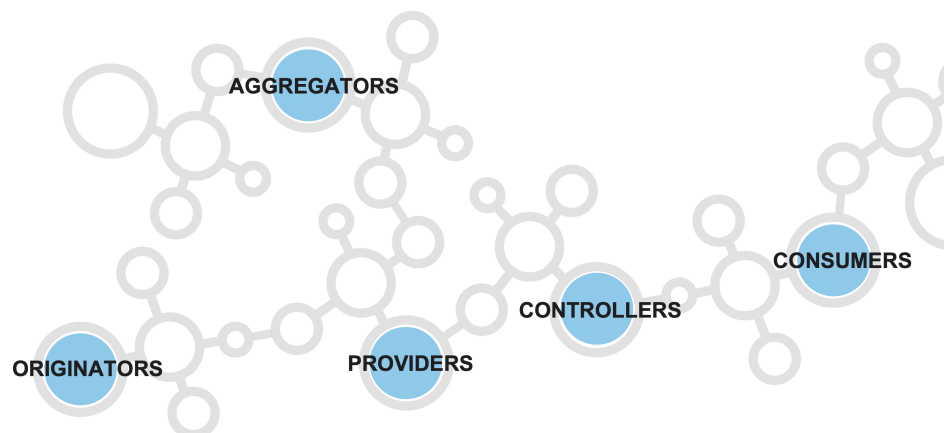
In the future, we will be looking at this: an industry made of companies called Originators, Providers, Aggregators, Controllers, and Consumers. This will better reflect the work actually done by these companies.





Progressively, we should expect to see the emergence of new types of players and ecosystems:

- The **ORIGINATORS** will be firms gathering land and financial resources. They will create data by defining the built assets.
- The **PROVIDERS** will provide the design, the raw material, the building products, the workforce (whether it is humans and robots), the equipment, and, most of all, the data.
- The **AGGREGATORS** will be like the general contractors of today. They will orchestrate the projects and manage the flows of data: they will run, supervise, and monitor.
- The **CONSUMERS** will be like the facility managers of today, in charge of the maintenance and the operations. They will use the data created by the other players to run the built assets.
- Finally, the **CONTROLLERS** will control the finished work (the “as-built”). They will make sure the quality of the data and the processes are enforced.



Doing the right things, at the right time.

But what do you have to do really? It is about doing the right things, at the right time.

## Doing the right things, at the right time



## How can we help?

Here are 2 catalysts of your transformation



### Arc of Transformation Program

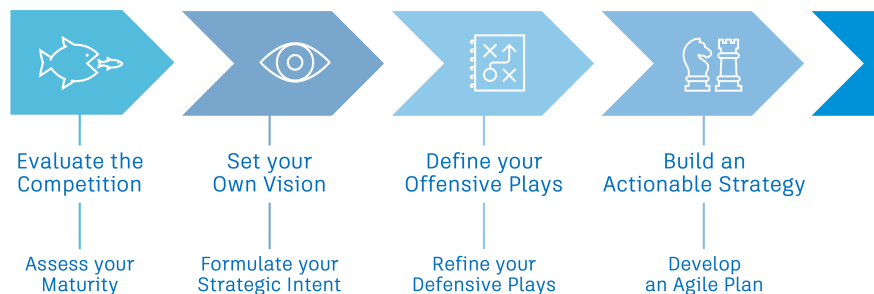
Set a vision  
and a strategy



### Industry Outcome Framework

Build defensive  
and offensive capabilities

## If you want to Play Offense, what is the best “sequence of events”?



### Three Quotes and Four Animals.

Here are the three quotes and four animals I use during the presentation.

*"Why is it so difficult for established companies to pull off the new growth that business model innovation can bring? Here is why: they don't understand their current business model well enough to know if it would suit a new opportunity or hinder it, and they don't know how to build a new model when they need it."*

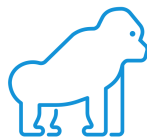
**Clayton M. Christensen**, *The Innovator's Dilemma* (1997)

*"In today's era of volatility, there is no other way but to re-invent. The only sustainable advantage you can have over others is agility, that's it. Because nothing else is sustainable, everything else you create, somebody else will replicate."*

**Jeff Bezos**, Founder of Amazon

*"You must always realize that the line of progress is never a straight line. It always has its dips and curves, its meandering points. The hopeful thing is to keep moving."*

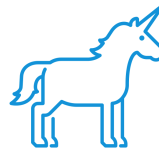
**Dr Martin Luther King**, *Where Do We Go From Here: Chaos or Community?* (1969)



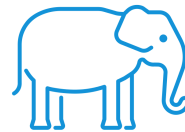
**Gorilla**



**Lion**



**Unicorn**



**Elephant**