

Heavy industries may become the next frontier for the platform revolution

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Several sectors have already been disrupted by platforms: think of telecommunications, media and entertainment and more recently hospitality and mobility. From Uber to Airbnb, platforms appear the business model revolution of choice for the B2C and service industries.

Little wonder perhaps that if you talk to executives in B2B companies in heavy industries they tend to think that platform business models simply do not and cannot apply to them. “Platforms are for B2C” they will typically observe with resignation.

Such shrugging of shoulders may well be premature. There are strong signals that B2B sectors, even the most traditional and heavy ones, are the next in line to be disrupted by platforms.

Take the construction industry. This is one of the traditional sectors that most people would reckon to be the least likely to join the platform revolution. After all, putting up a building – even a shiny new office building – is a barely industrialized process. Building is done through manual work with craftsmen on site. It is not much different from decades or even centuries ago. This is why the productivity rate in the construction industry over the last 40 years has been almost flat, whereas in other sectors it has more than doubled, according to a [study](#) conducted by Stanford University.

Project delays and budget overruns are the norm. Such inefficiencies have several root causes. Most can be attributed to “information costs”: poor communication and coordination between the many parties involved in planning and erecting a building resulting in changes, clashes, errors, and rework. The architect doesn’t make something clear to the site manager who miscommunicates to the people on site who then compound the errors by ordering the wrong materials from outside suppliers. According to recent [construction surveys](#), information costs can easily amount to 20 per cent or more of the total cost of constructing a new building.

But time is ripe for a change. After many decades of stability, the construction industry is undergoing a transformation that will change the way buildings are designed, built, operated and maintained through their life cycle. As in other industries, digitization is the main driver of change.

Digitization in construction means **Building Information Modelling (BIM)**. This is a process to generate and manage multidimensional information about a building (not only 3D geometry, but also cost, time, thermal, lighting, carbon performance) involving all parties (from architects, to planners, engineers, contractors, system manufacturers) who can coordinate their tasks being connected on the same platform.

BIM has reached the tipping point in terms of adoption in several countries. Recent [studies](#) show that it already is used by 73 per cent of architects and planners in the US, 67 per cent in Canada, and [50 per cent in UK](#). Its usage has been helped by new regulations and digital requirements for public tenders (especially in the EU).

Now architects and planners have the possibility to work on cloud-based BIM software where they can combine 'BIM Objects' (i.e. digital files representing construction products like glazing systems, flooring, facades, and roofing). This is similar to a LEGO system. They can easily look for parametric BIM objects in online digital libraries through thousands of objects uploaded by the manufacturers and/or system integrators.

Digital players like Autodesk are emerging as the dominators of this new "platform-like" business thanks to network effects: if more and more users converge to the same software/standard, it is more likely new users will also choose that software/standard; if more and more apps and plug-ins are available for a certain software ecosystem, it is more likely new users will prefer that ecosystem; if more and more data is available the platform itself becomes better performing.

Such a platform business orchestrates the matching between producers of value (in this case the manufacturers who upload BIM Objects on the BIM libraries), users (architects, engineers, and developers using the BIM software) and third-party developers of Apps (e.g. performance simulations).

As architects and other key influencers/decision makers look for BIM objects in the BIM libraries, the manufacturer will need to be present in the key libraries, well visible in the search engines and provide high quality (i.e. dynamic data rich) BIM objects to the architects, who will make a decision early on in the process (much earlier than today) with a simple click to choose a BIM object.

Construction will not be alone. Think of agriculture, perhaps the oldest sector of any economy. Even in agriculture we see signals suggesting a move in the direction of digitization and platformisation. For example, John Deere, the leader in tractors and agriculture machinery, understands the importance of data and information about fields and crops that is collected via sensors positioned on tractors and transmitted to a cloud-based open platform where a community of developers can easily add Apps. This is similar to what happened in the mobile internet space with the Apple Store or Google Play. This allows farmers to access the tools they need from a variety of agricultural software providers. Companies from different sectors (e.g. yield management, precision agriculture, pest control, insurance) are already interested in jumping on the platform. This should generate value for the farmers. More services drive more users, more users attract more service providers, creating a highly scalable network effect.

Elsewhere, other heavy industries where we see early signals of looming platformisation are power and gas, robotics and industrial automation, 3D printing, and home batteries.

For all the understandable scepticism, the revolution is happening. Heavy industry companies need to quickly understand the new rules of the platform economy and analyse the value shifts in their ecosystem if they want to be able to fight back and remain competitive and profitable.



Notes:

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