

FEM CON

Empowering
Women in
Construction



MODULE 5

Women-empowered Innovation and Disruption in Construction



www.femalesinconstruction.eu



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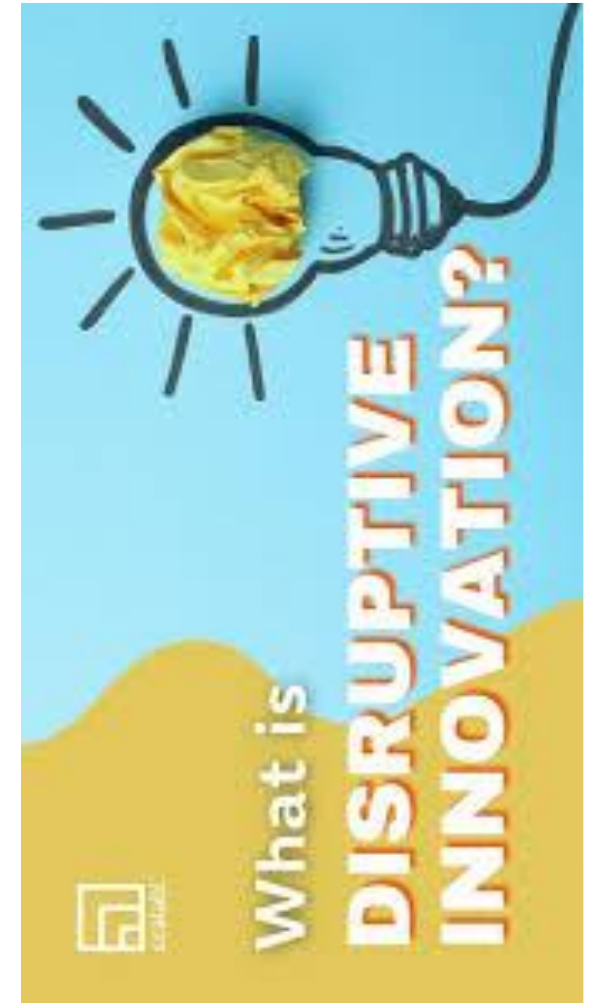
The only three things you need
to change the World
are vision, passion, and action



Disruptive innovation

Disruptive innovation is not the same as breakthrough technology, that makes good product a lot better. It uses technology (sometimes breakthrough technology or sequence of technology) to **propose a new value**.

Disruptive innovation transform product that historically was complicated and expensive and only few (skilled and rich) people had access to it, into a **product** that is **affordable** and **accessible** and can **address wider population**.



Disruptive innovation (in construction)



Disruptive innovation is a new solution offered to the market that **serves the needs of low-end customers**, who need simpler and cheaper products or services.

By offering more effective solution, disruptive innovation quickly becomes mainstream.

Disruptive innovations are positive force not only in a traditional business sense, but socially and economically. **They are important in construction services, that address human basic needs and affects quality of life.**

Disruptive vs sustainable innovation



“Disruption” describes a process whereby a smaller company with fewer resources is able to successfully challenge established incumbent businesses.

Specifically, as incumbents focus on improving their products and services for their most demanding (and usually most profitable) customers, they exceed the needs of some segments and ignore the needs of others.

Entrants that prove disruptive begin by successfully targeting those overlooked segments, gaining a foothold by delivering more-suitable functionality—frequently at a lower price.

Source: <https://towardsdatascience.com/ai-and-disruptive-innovation-393ee89eb5dd>

Source: <https://hbr.org/2015/12/what-is-disruptive-innovation>

Two types of disruptive innovation



- 1. Low-end disruption:** New entrants have to compete against established companies in established markets and are usually unable to create a product of high enough quality to meet customers' needs at first. As a result, disruptive innovators tend to target market segments at the low end of the market. These customers are often viewed as less profitable customers by established companies. In this situation, the new entrant, capitalizing on new technologies, creates a low-end product that may be worse than the original but still meets the requirements of the most price-conscious customers. Once the disruptor establishes a foothold, they move upwards to increase profit margins by targeting the more demanding customers.

Example:

An example of this is online booksellers, who targeted the bottom of the market, offering books for a lower price to customers who cared more about the low cost than the luxury of browsing in a bookstore to see available options. Over time, they were able to target high-end customers as well, which yielded higher profits.

Two types of disruptive innovation


















- 2. New-market disruption:** New market disruption happens when a new entrant expands the market by targeting customers who didn't previously use a similar product at all. By offering a more accessible or cheaper product, the disruptive company thus creates a "new market."

Example:

The first computers—known as mainframes—were large, expensive, and challenging to operate. Therefore, the computer market initially only catered to large businesses. The first providers of personal computers—minicomputers—saw the untapped potential and capitalized on it. Although this disruptive technology was primitive compared to today's computers, its price tag, functionality, and convenience appealed to the masses.

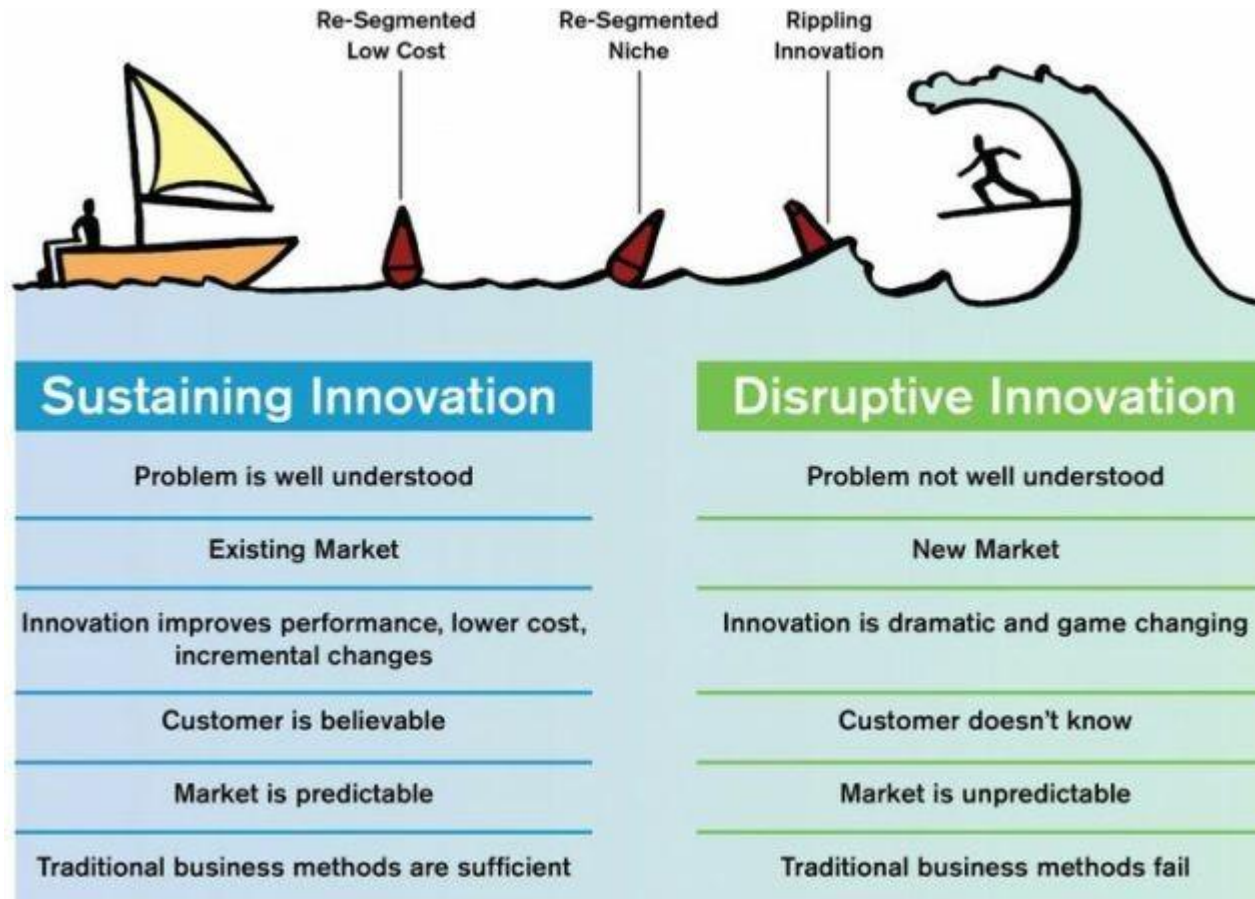
<https://www.masterclass.com/articles/disruptive-innovation>

Some examples

| Industry | Incumbent | Entrant | Type of innovation (Sustaining vs. Disruptive) |
|---|--|---|--|
| Online Education in a University |  |  | Sustaining Innovation |
| Personal vs. Xerox High-Quality Copiers |  |  | New-Market Disruptive Innovation |
| On-demand Video Streaming |  |  | Combination of Low-End and New Market Disruptive Innovation |
| Smartphone vs. Pcs |  |  | New Market Disruptive innovation |
| PCs vs. Mainframe Computers |  |  | Combination of Low-End and New Market Disruptive Innovation |
| Airbnb vs. Hotels |  |  | Combination of Low-End and New Market Disruptive Innovation |
| Digital vs. Film Cameras |  |  | Combination of Low-End and New Market Disruptive Innovation |
| Cellphone Camera vs. Photography Industry | photography market as a whole |  | Combination of Low-End and New Market Disruptive Innovation |

<https://alipilevar.medium.com/how-to-build-a-disruptive-and-innovative-mentality-in-your-daily-job-ee3ae31de159>

Disruptive vs sustainable innovation summary



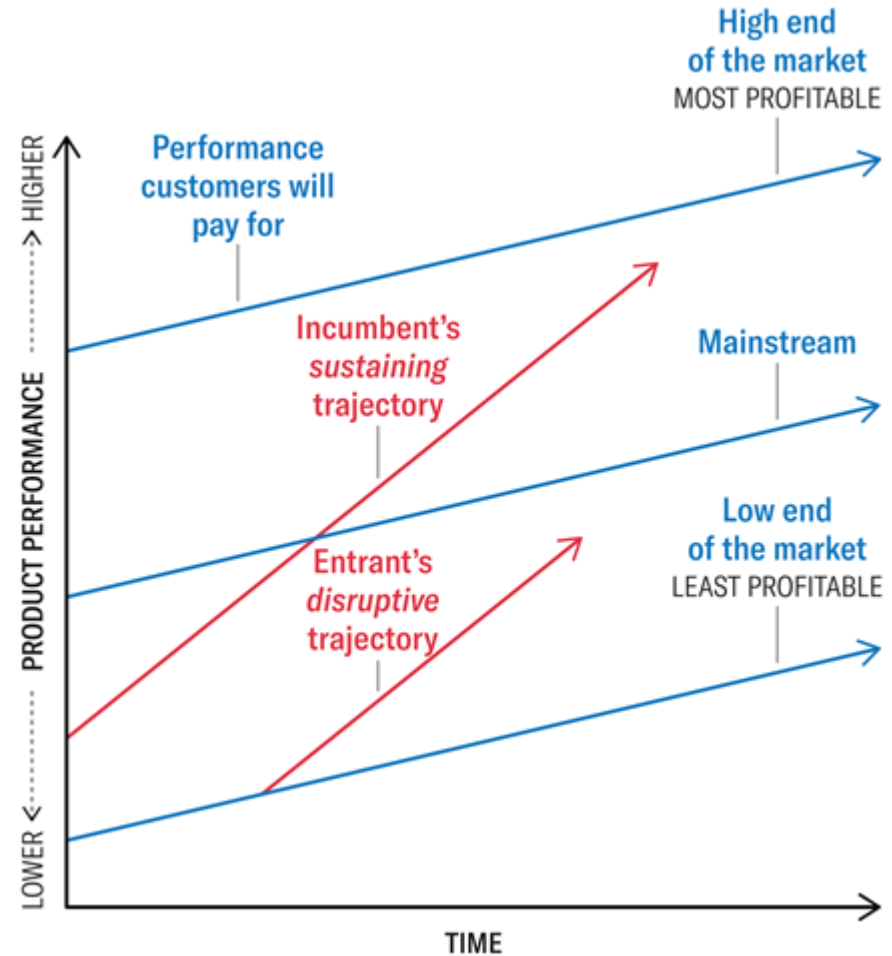
<https://www.linkedin.com/pulse/disruptive-innovation-rashid-najeeb/>

The model of disruption – disruptive entrant's trajectory

The Disruptive Innovation Model

This diagram contrasts *product performance trajectories* (the red lines showing how products or services improve over time) with *customer demand trajectories* (the blue lines showing customers' willingness to pay for performance). As incumbent companies introduce higher-quality products or services (upper red line) to satisfy the high end of the market (where profitability is highest), they overshoot the needs of low-end customers and many mainstream customers. This leaves an opening for entrants to find footholds in the less-profitable segments that incumbents are neglecting. Entrants on a disruptive trajectory (lower red line) improve the performance of their offerings and move upmarket (where profitability is highest for them, too) and challenge the dominance of the incumbents.

Source: <https://hbr.org/2015/12/what-is-disruptive-innovation>



How does the disruption happen? (C. Christensen)

Disruptive innovation has 3 components:

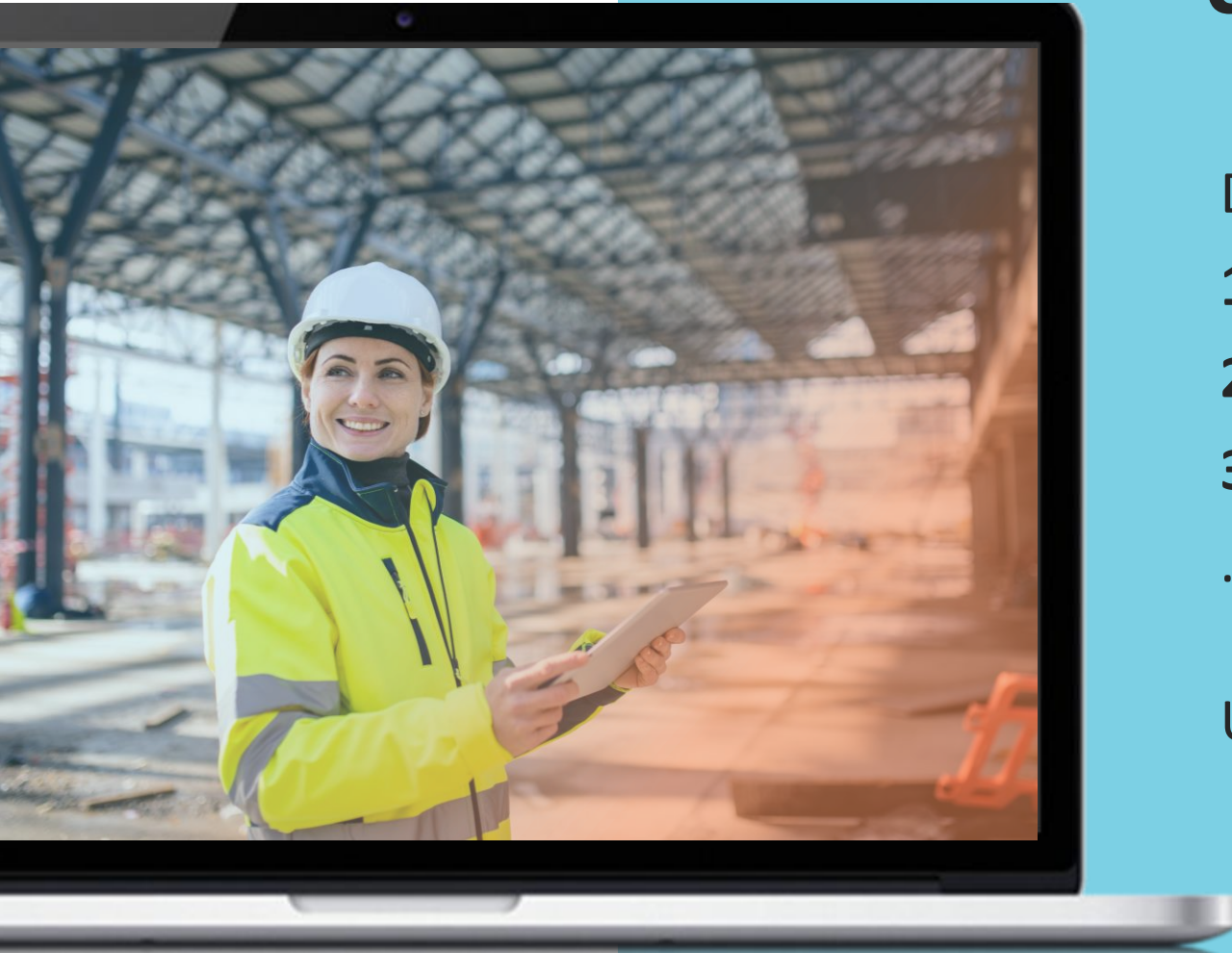
- 1. Is triggered by enabling technology** - An invention or innovation that makes a product more affordable and accessible to a wider population
- 2. Must have an innovative business model** - A business model that targets non-consumers (new customers who previously did not buy products or services in a given market) or low-end consumers (the least profitable customers)
- 3. Coherent value network must exist** - A network in which suppliers, partners, distributors, and customers are each better off when the disruptive technology prospers

TECHNOLOGY

BUSINESS MODEL

VALUE NETWORK

„Open your mind” challenge



Discover....

1. enabling technology
2. innovative business model
3. coherent value network

...that could facilitate **disruptive
innovation in construction**

Use instructions from the workbook
(Task 5.1)

Learning activity (JIGSAW): *split into 3 groups*

Each group to engage into one component of disruptive innovation:

1. Is triggered by enabling technology - An invention or innovation that makes a product more affordable and accessible to a wider population

TECHNOLOGY

2. Must have an innovative business model - A business model that targets non-consumers (new customers who previously did not buy products or services in a given market) or low-end consumers (the least profitable customers)

BUSINESS MODEL

3. Coherent value network must exist - A network in which suppliers, partners, distributors, and customers are each better off when the disruptive technology prospers

VALUE NETWORK

01

Group 1: enabling technology

Read information about new technologies and discuss together how these technologies could be applied in construction to create disruptive innovation

Leading questions to be addressed:

- What new or emerging technologies could be applied in construction (e.g. civil engineering, design & architecture)? How? In which areas?
- What technologies could make women's participation in construction more accessible?
- What technologies could make the best use of women competences in construction?

**Use Worksheet 5.1.1. to write down your ideas.
Be open, playful and creative!**



02

Group 2: innovative business model (BM)

Read information about innovative business models and discuss together how these models can be applied in construction to create disruptive innovation

Leading questions to be addressed:

- What BM can be applied in construction (e.g. civil engineering, design & architecture)? Are there any specific elements of BMs that are particularly interesting and inspiring?
- What BM could make women's participation in construction more accessible?
- What BM could make the best use of women competences in construction?

**Use Worksheet 5.1.2. to write down your ideas.
Be open, playful and creative!**



03

Group 3: coherent value network (VN)

Read information about value networks and discuss together how these networks models can be applied in construction to create disruptive innovation

Leading questions to be addressed:

- What existing VN can be used in construction (e.g. civil engineering, design & architecture) to create new value and/or new opportunities?
- What VN elements could make women's participation in construction more accessible?
- What VN elements could make the best use of women competences in construction?

**Use Worksheet 5.1.3. to write down your ideas.
Be open, playful and creative!**



Group changing

Now, groups of 3 are formed, one person representing each one of the former groups

Each person act now as an expert in a field that was analysed in the previous exercise (enabling technology, business model, value network)

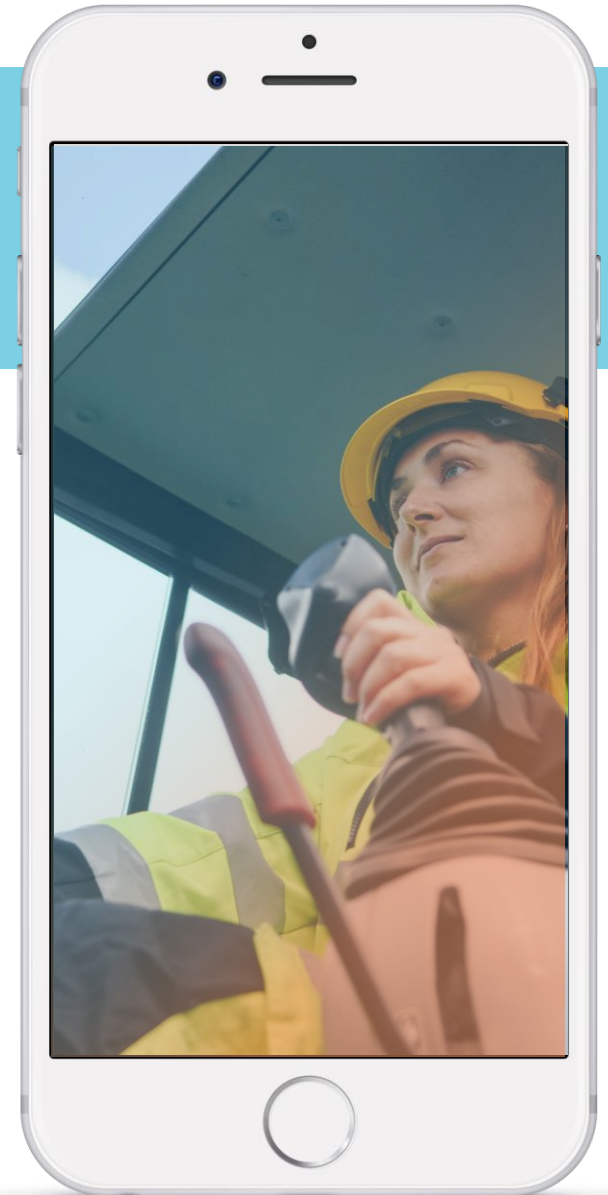
New groups will now work on IDEAS and PROPOSITIONS for disruptive innovation in construction

Use Worksheet 5.2.1. to write down your ideas.

Be open, playful and creative!

Refer to your business or construction area that you know well.

Continue work with Worksheet 5.2.2.



Assesment & feedback (INTERVISION)

Come back to your initial groups and discuss/compare ideas to review lessons learnt

Leading questions to be addressed:

- What components of disruptive innovation did you choose?
- What were your IDEAS and PROPOSITIONS?
- How did you revise your idea(s)?
- What are the directions of further investigation?

Close the discussion with **conclusions**:

- What did you learn about disruptive innovation
- How construction sector can be transformed?
- How disruptive innovation can/will facilitate higher participation of women in construction





To grow big, think big. Dream BIG dream. Create a world-changing vision, and your vision will lead you.



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Thank you

Any questions?

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