

# Evolution meets Revolution

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SMECluster Event 4 – Stepping into the Twinned Digital World of 4IR

# evolution

/ˌiːvəˈluːʃ(ə)n, ˈɛvəluːʃ(ə)n/

Noun

**a** :a process of continuous change from a lower, simpler, or worse to a higher, more complex, or better state

# revolution

/rɛvəˈluːʃ(ə)n/

Noun

**a** :a sudden, radical, or complete change

# Evolution VS. Revolution

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## Evolution

- Seen as slow
- Takes a lot of time
- Gradual iterative steps
- More likely approach to be taken by the industry
- Less risk
- Relies on known technologies

## Revolution

- Seen as fast
- Takes less time
- Radical change from one moment to another
- More likely approach to be taken by startups
- More risk
- Relies on newer, sometimes untested technologies

# Industrial “Revolutions”

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- IR1

- Transition from agrarian and rural societies to urban and industrial
- Iron and textile industries
- Steam engine

- IR2

- Industrial growth of pre-existing industries, and expansion of new ones
- Steel, oil and electricity
- Telephone, lightbulb, phonograph, internal combustion engine

- IR3

- Digital revolution
- Analogue electronic and mechanical devices
- PC, Internet, ICT

# 4<sup>th</sup> Industrial “Revolution”

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- Calling it a revolution can carry its risks:
  - Technology developers expect rapid adoption and change, but the industry remains conservative
  - The expectation that new developments will change everything just for the sake of being “NEW” (not necessarily better)
  - Retrospectively, IR1, IR2, IR3 are seen as so radical that it is easy to forget they took years (IR3 can said to still be going on)
  - New technologies are usually friendlier for the implementer, not the user, it is very easy to lose sight of what the end-user values the most (i.e. the user doesn't care that data is easily transferred from a PLC to the ERP, he cares that the data can help him make decisions)

In short: **Technology for technology's sake can make us lose sight of how to accomplish actual change.**

# Thinking R(e)volution instead

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- A compromise between complete and radical evolution and slow changing evolution
- Allows us to **re-focus** on **HOW** to apply the technologies and not see them as cure-all solutions, it also allows us to learn to compromise – Rome wasn't built over night.
- Technology is always present and improving, these days the problem is not convincing people that the technology works, it is convincing them that it is easier to use and it **WILL** make **THEIR** lives easier.
- Evolution is usually seen as organic, namely, it will happen no matter what, our job is to encourage the changes needed to move it along.

# r(e)volution

Noun

**a** :a radical, or complete change that is realistic and accomplishable by successfully refocusing effort and new technologies without disregarding the present nor the past.



Thank you