AVEVAWORLD
PARIS

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Genabyte: How to deliver value at scale – 9 practical takeaways

Driving digital transformation from strategy to value

Bram van Genabet, Digital Strategy Evangelist

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Driving digital transformation from strategy to value
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Digital Strategy Evangelist

Digital transformations in manufacturing

2005
Chemical engineering & Material sciences

2010
Process & automation engineering

2014
Advanced process control consultant

2015
Project engineer

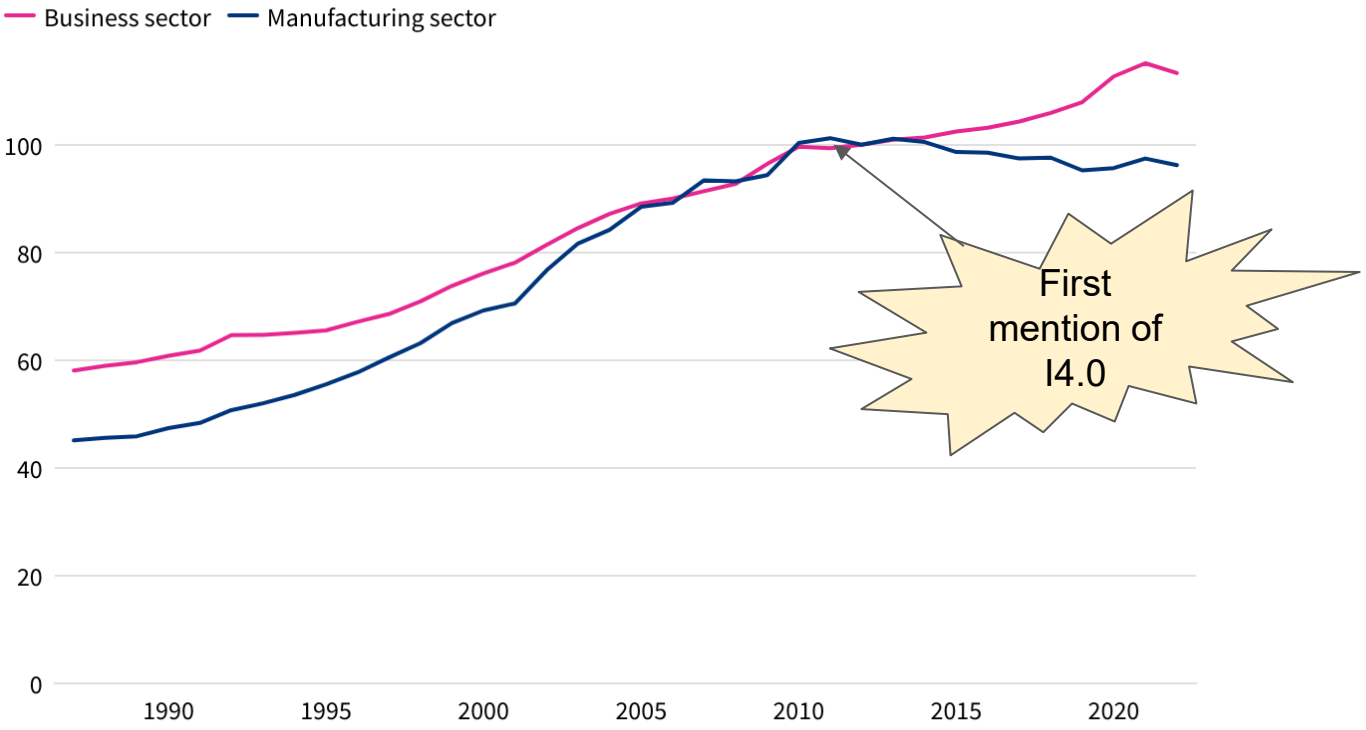
2017
Digital innovation manager

2023
Digital Strategy Director

2024
Digital Strategy Consultant

After experiencing steady growth since the 1980s, labor productivity in the US manufacturing sector dropped by 5% since 2011.

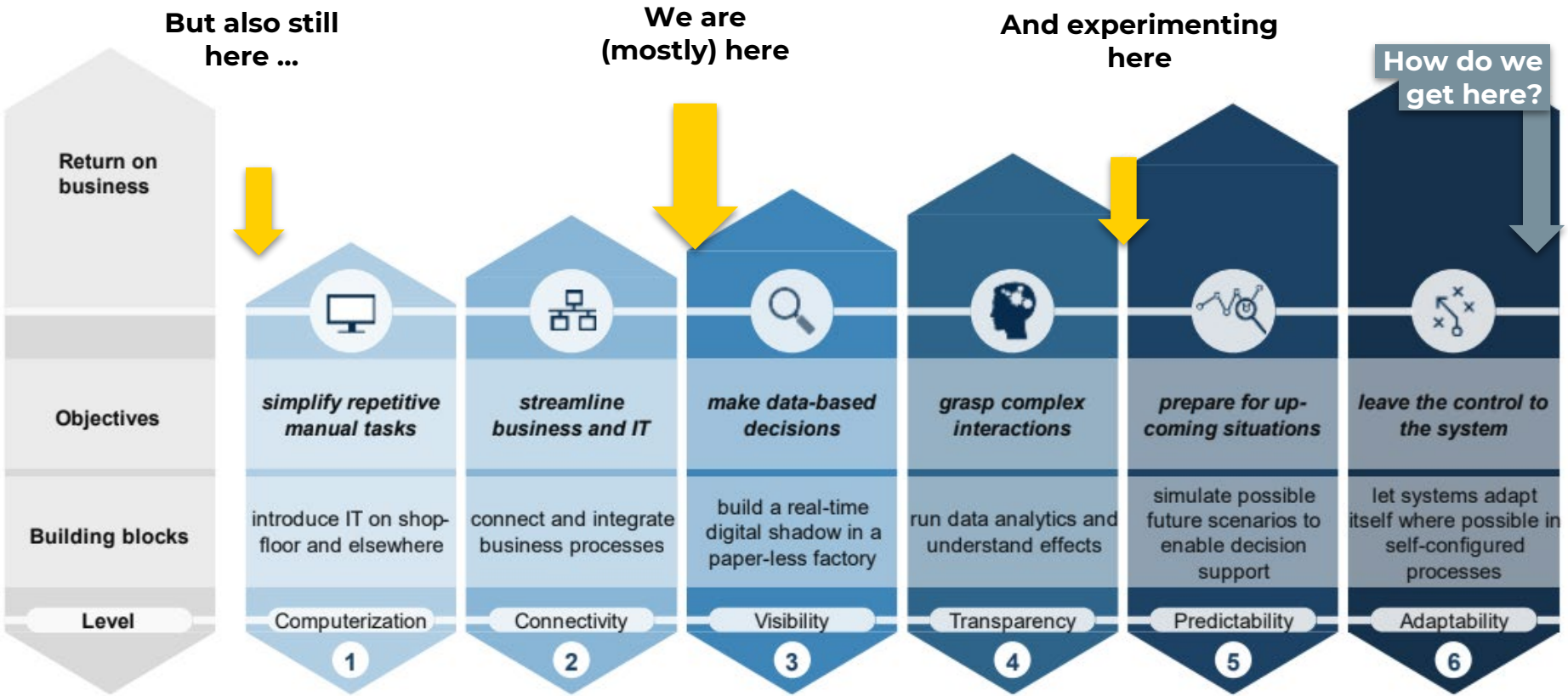
Labor productivity index, by sector, 1987-2022



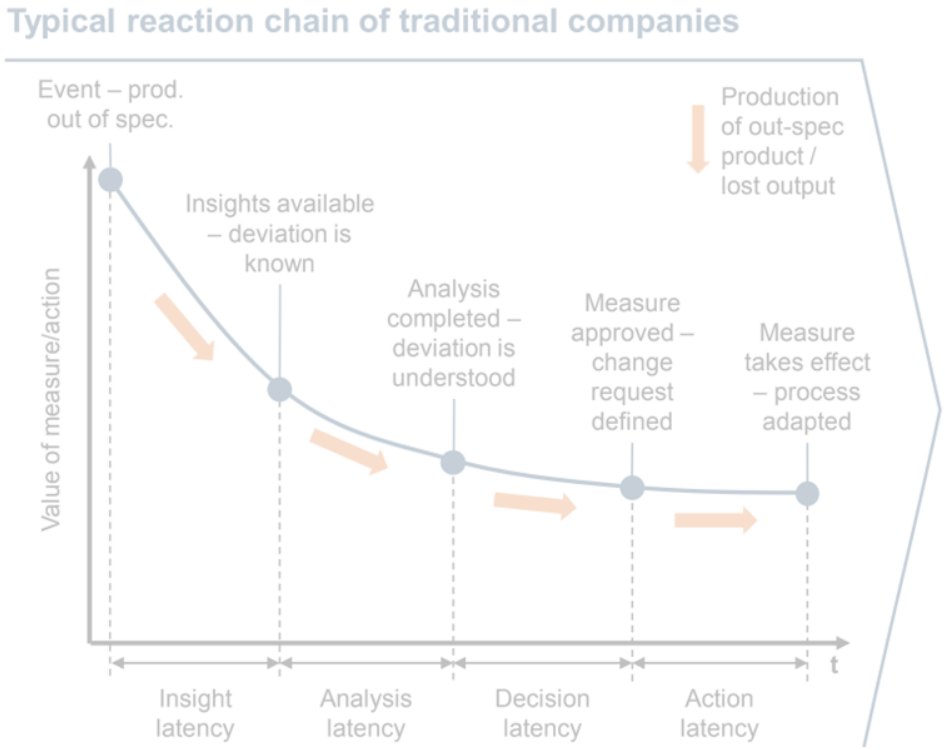
Source: Bureau of Labor Statistics

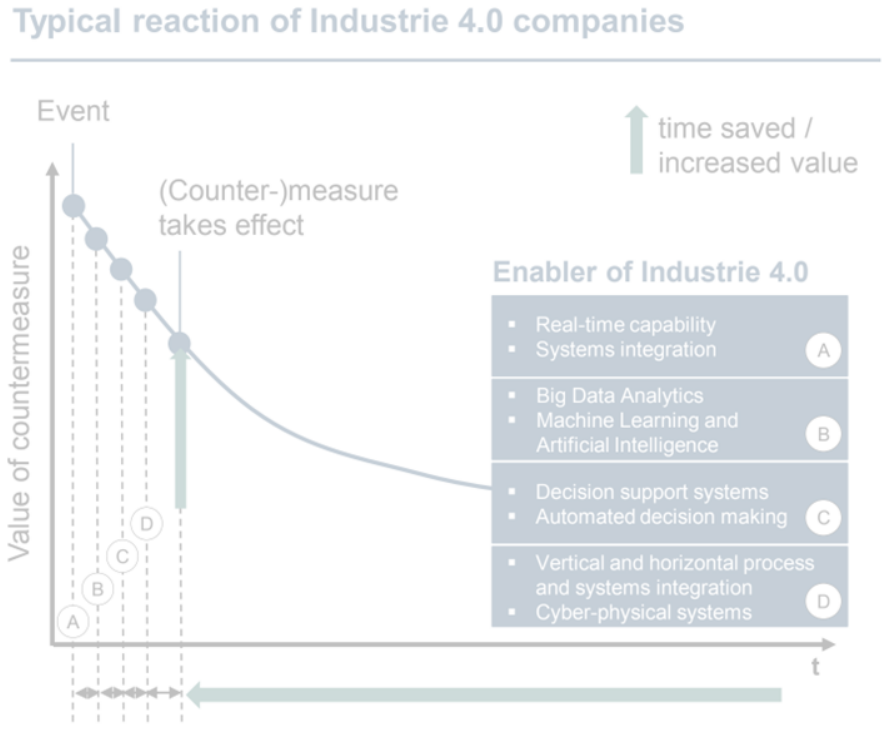
60-70% of digital transformation projects fail to deliver the promised value

What is I4.0? – AI will accelerate the journey to deliver full closed loop control, but the bottleneck will be high quality connectivity, data and change management

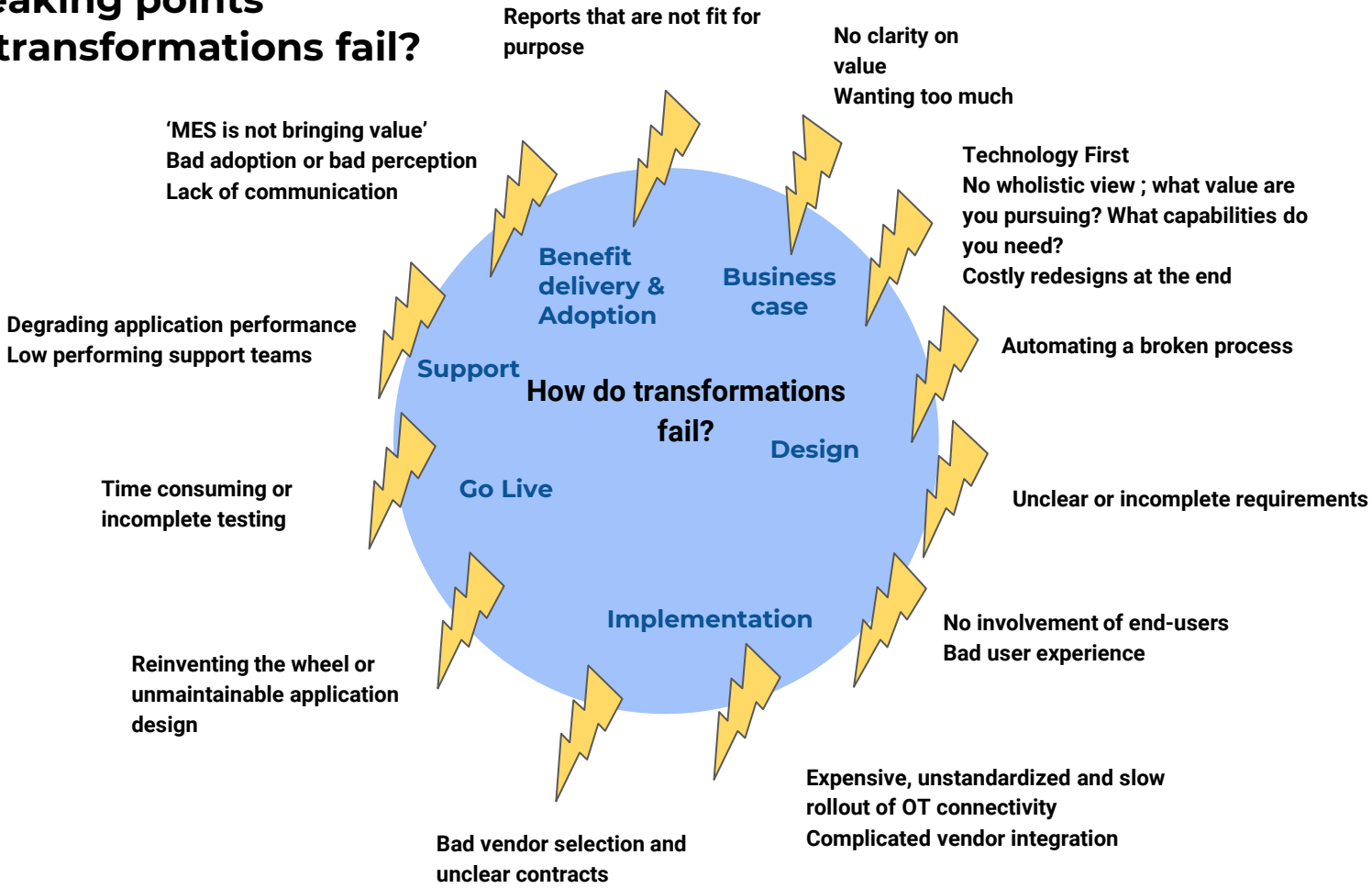


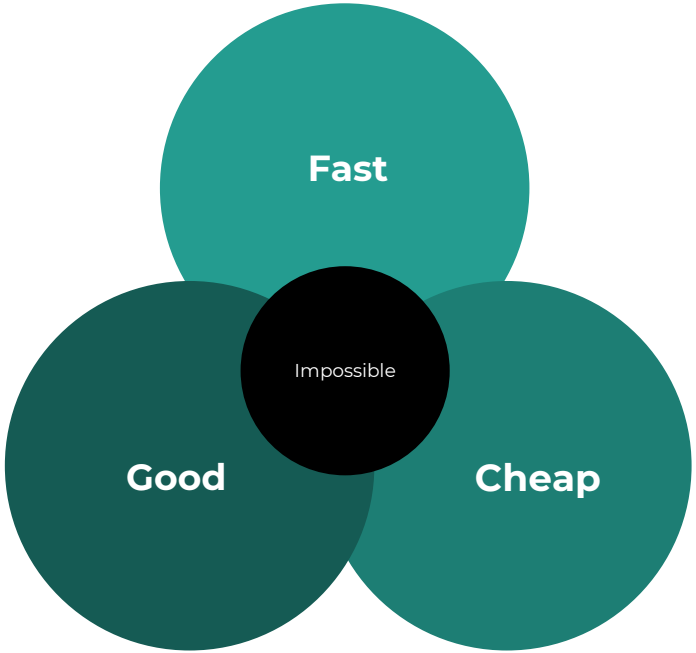
Why I4.0? - I4.0 facilitates rapid anomaly response and increased efficiency through integrated sensors, AI, and data analytics, enhancing value extraction from **value** streams.
A successful digital transformation should aim to improve EBIT by at least 20%



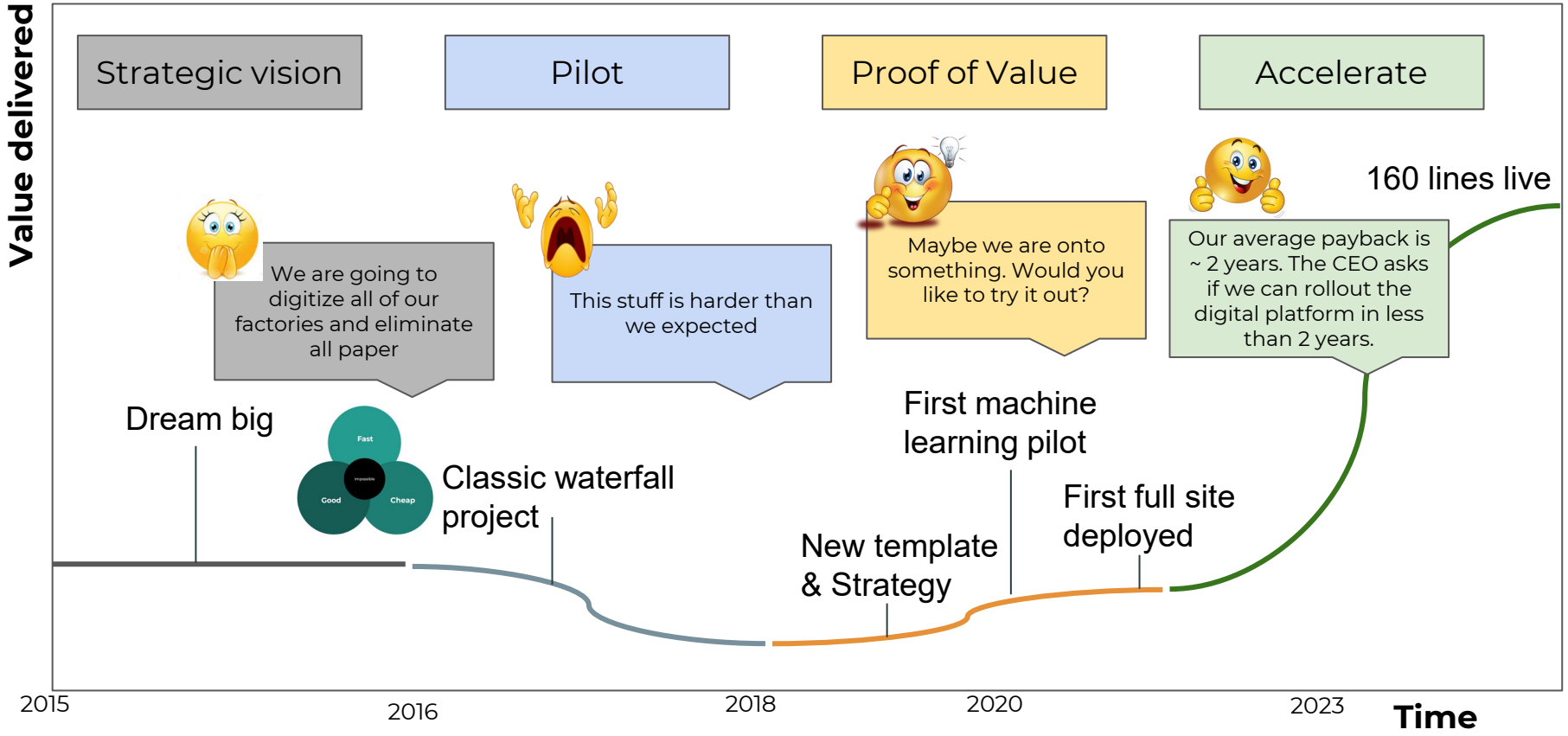


12 Breaking points
Why transformations fail?



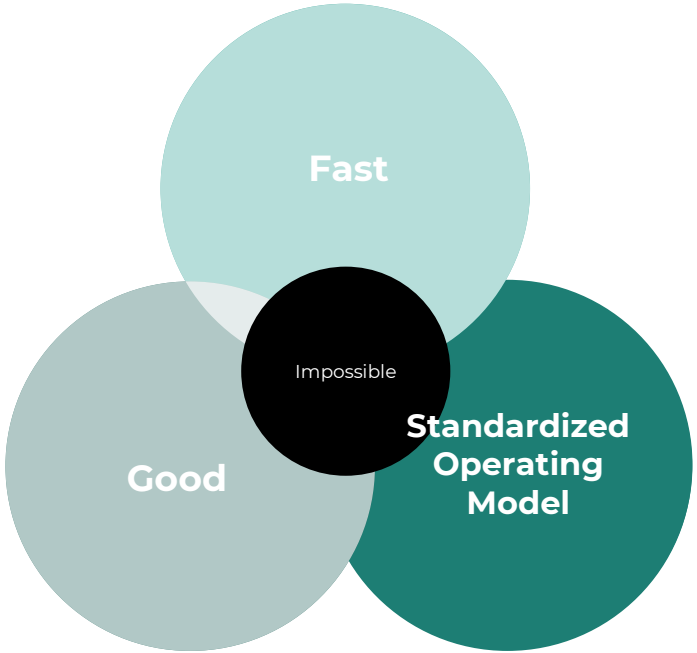

Fast
Impossible
Good
Cheap

Value delivery in our digital transformation journey was like an exponential growth curve, it takes a long time to gain momentum, but scales fast when it gets traction.



1) Don’t automate a broken process

Standardizing and simplifying processes should be done prior to automating complexity, but be wary of overfitting the standard



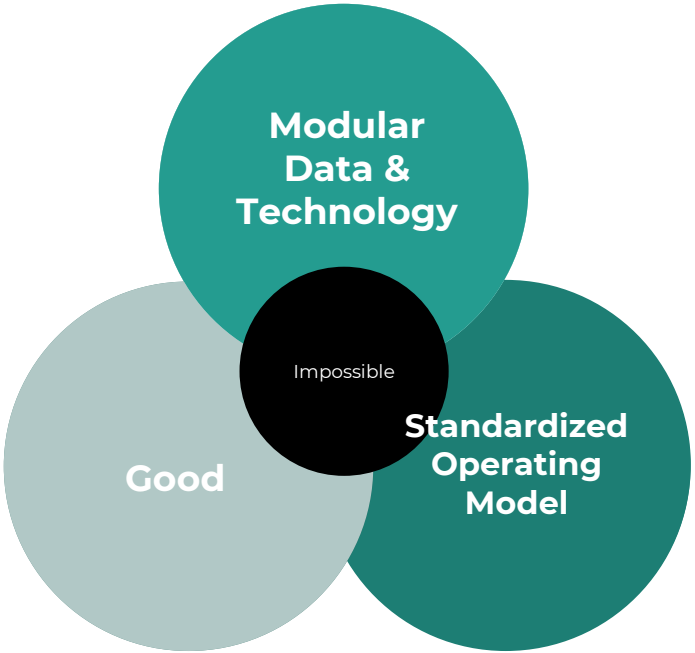
Standardized process – same way of work across factories. Eliminate complexity by design and simplify rollout across sites and enable easier knowledge sharing
Example : OEE Definition

Unified namespace – model driven implementation will speed up future rollouts and bring benefits of scale. We roll out new reports in hours instead of months now.
Tool : Naming Convention

Template driven –TCO for maintenance and feature development will be reduced vs. having to handle multiple exceptions

2) Fail forward

Gain speed by implementing technology in an agile – modular way with strong focus on data quality able to deliver quick-wins and tangible improvements

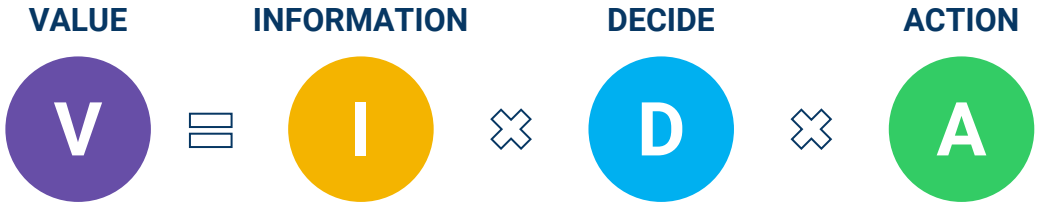


Agile – E2E application design combined with modular deployment and quick user feedback cycles to ensure validation ‘fail forward’

Continuous data improvement – Data quality will be a challenge Data does not need to be 100% correct to bring value (e.g. Trend can bring insights) but data should not be trusted 100% either (drift / calibration / human errors …). A plan to continuously improve data is critical. Requires **data ownership**

Data availability – Not all data will be digitally available, but full automonous control will require a digital shadow of all controlled parameters. The requires continued investment

Value extracted is directly proportional to having good data AND doing something with this data



Value extraction depends on
1. Data quality, availability & timeliness
2. What you do with this data

1. Identify constraint
2. Capture loss information

1. Pick a top loss
2. Decide countermeasures

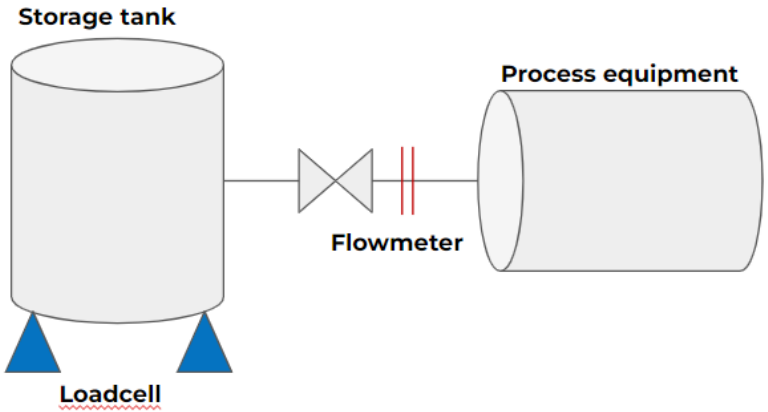
1. Implement countermeasures
2. Capture what you learned

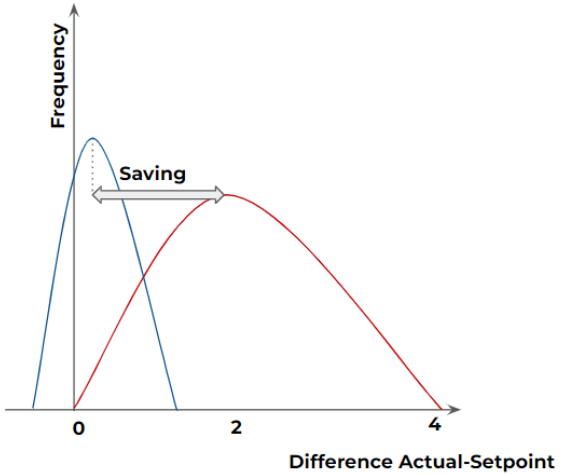
Poor data quality → Wrong decisions → Incorrect actions → Poor results

No one to analyse the data → No insights → No actions → No results

IDA model for improving productivity using information. Information, Decisions and Actions drive Results.
Source: https://www.oee.com/improve-oee/

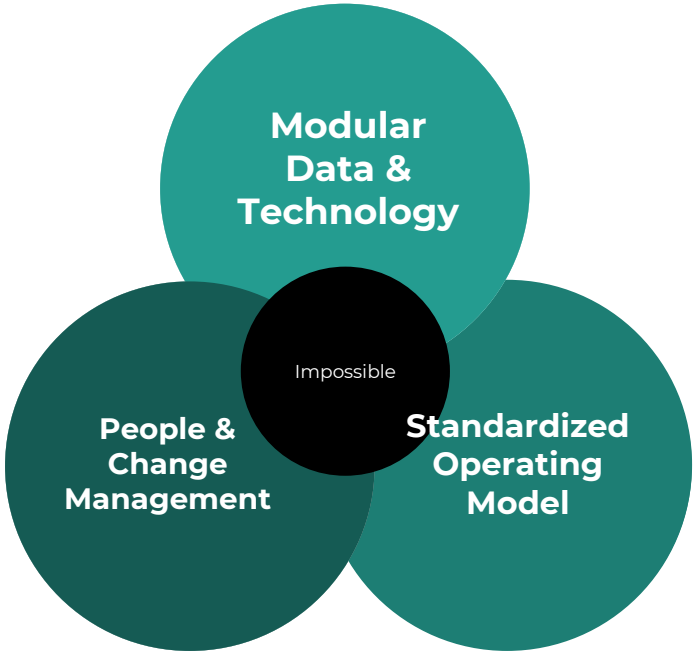
The value delivery formula requires access to right information with talent able to conduct the analysis.
1 use case can pay for the entire digital transformation project





3) User centricity is key

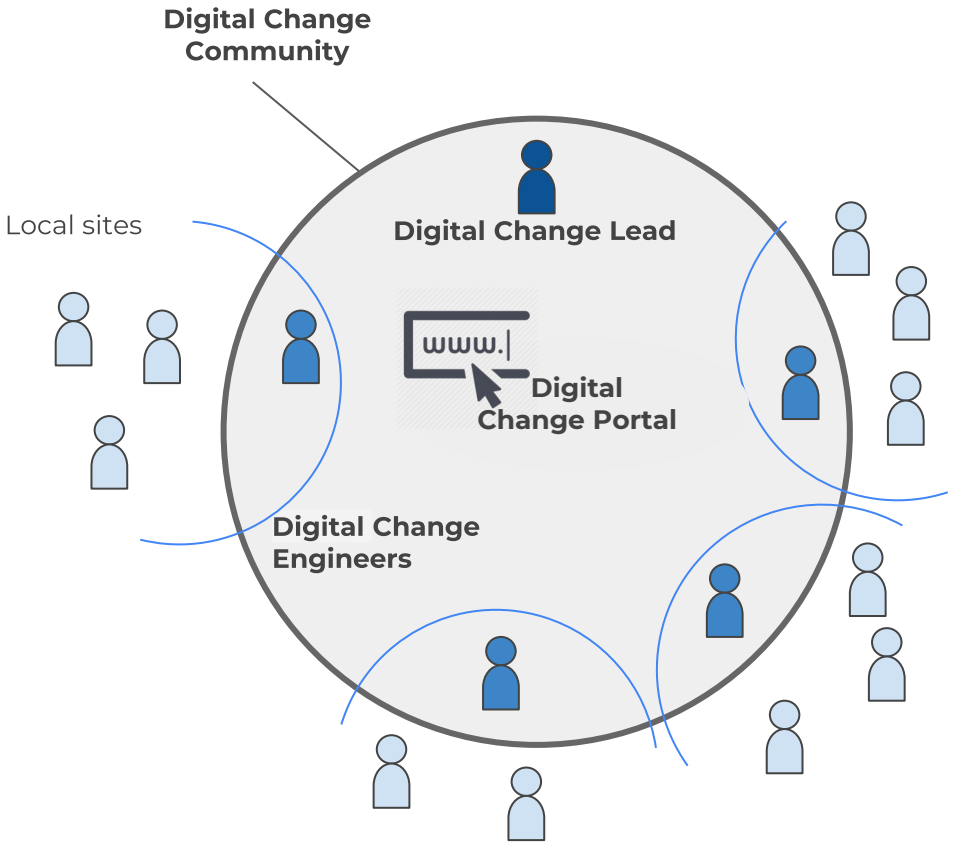
Success comes from adoption which requires a strong focus on change management, talent and UI/UX



Change management – Dedicated digital change agents are the face of the digital transformation on the shopfloor. Communities are in place to share best practices

Talent - V = I * D * A
Results = information * decision * action. Without people able to analyse the new available datastream the result will be 0.

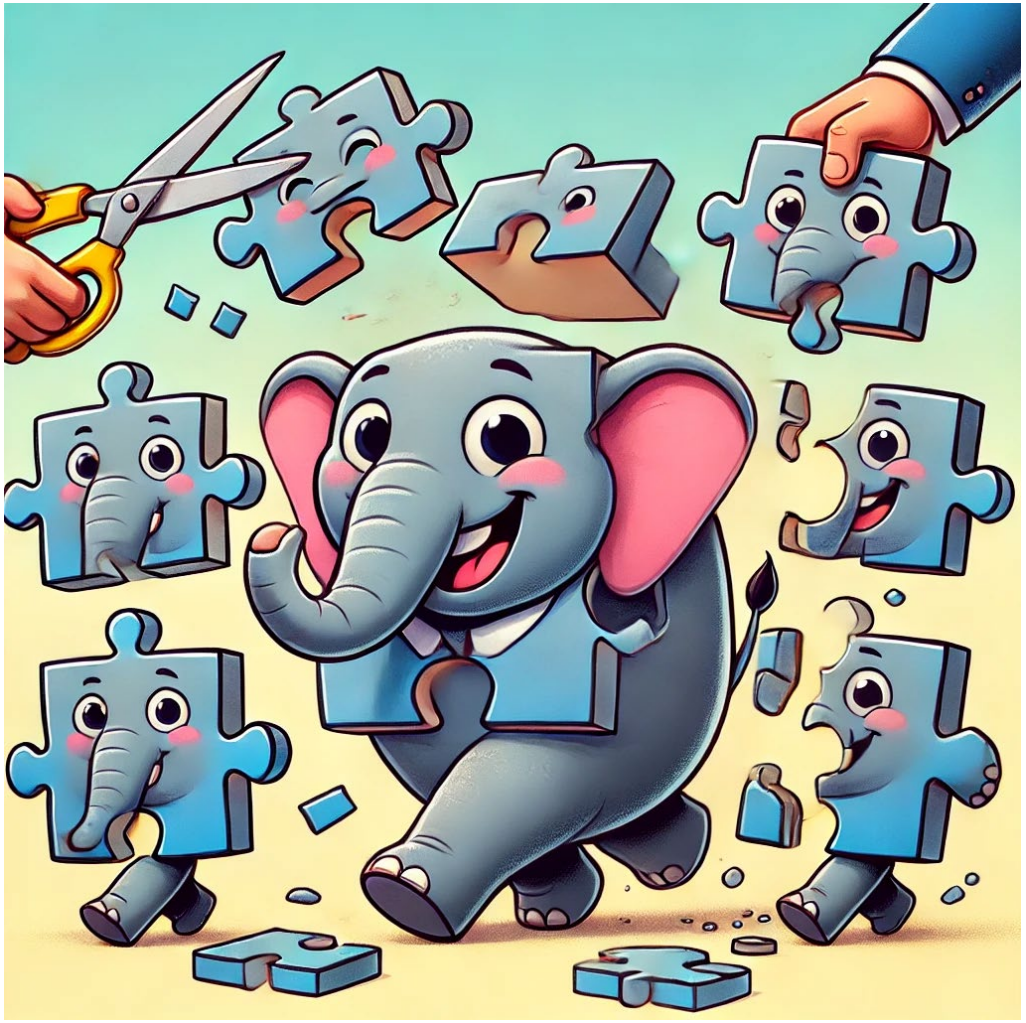
UI/UX – Successful digital applications need to feel like an improvement for the end-user. If it takes longer than the former paper-based process it's already a lost cause.



Local proximity & ownership – dedicated digital change engineers act as change agents in close proximity to the shop floor operations making sure issues get resolved timely, adoption is successful and the benefit case delivery is accelerated

Knowledge sharing – open communication about best practices, challenges, success stories, troubleshooting, standards …

Community building – Digital change lead brings teams together allowing benefits to scale better



Going paperless is not a 1-shot exercise but rather a multistep journey

Define as-is report (What exists?) → **Eliminate** obsolete reports (Do we need it?) → **To-be design** (What do we need to deliver value?) → **Technical** requirements (Are we ready to build this report?) → **Capability** requirements (Are we ready to use this report?) → **Build & Test** → **Change management** (Training & Handover) → **Continuous improvement** & Track usage

Example report digitalization roadmap

MES Layer 1&2

- OEE performance report
- Daily energy use report
- Tank inventory levels
- Rework addings

Connected worker tool

- Standard Operating Procedures
- Quality checklist
- Plastics & Glass inventory
- Shift handover checklist
- Raw material tank inspection card
- Digital GMP/HACCP checks

Mobile maintenance

- Maintenance routine checklists
- Maintenance work-order request form

MES Layer 3

- Shop floor paper
- New recipe creation form
- Real-time inventory report

Advanced process control

- Digital process parameter overview
- Virtual assistant for process parameters

Celebrate your successes,it’s a long journey

MES 1 year, Philadelphia, USA

Melbourne, Australia

Go Live Ceremony, Singapore

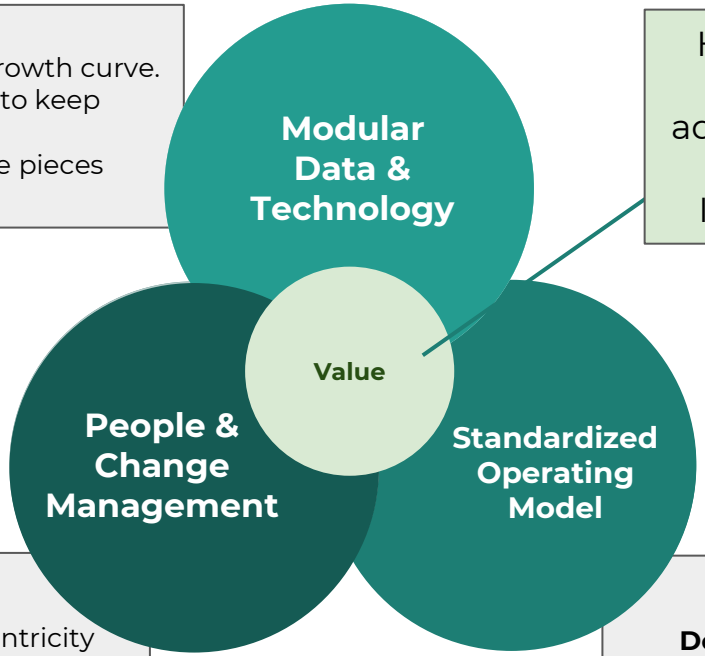
It’s about process, people and technology.
But it’s mostly about people !

Lodz, Poland

Baramati, India

A successful digital transformation requires a combination of standardized operating model with a core focus on people & change management supported by data & technology

Fail Forward
Success is on an exponential growth curve.
Look for low hanging fruit to keep progressing.
Cut the elephant in bitesize pieces



Have a clear vision of success. A good digital transformation addresses the core of the business (~ 20% EBIT improvement / Increase Customer Experience)

It's all about people
Design solutions with user centricity in mind
Foster talent and focus on training
Communicate, communicate, communicate

Don't automate a broken process
Standardize, simplify and adopt the right operating model for the business with technology enabling the change.

The IT/OT Insider

Thank you for your attention … Let's connect

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Please wait for the microphone.

State your name and company.

Please remember to…

Navigate to this session in the mobile app to complete the survey.

Thank you!