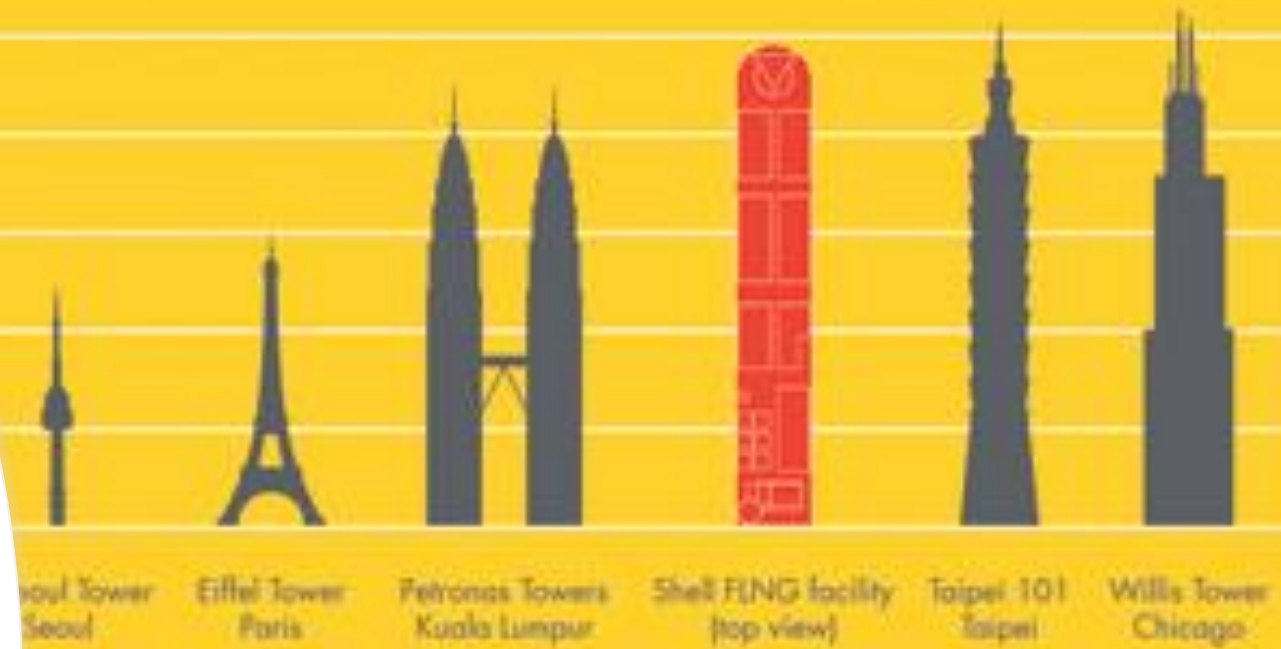


Agile Hardware in Capital Projects

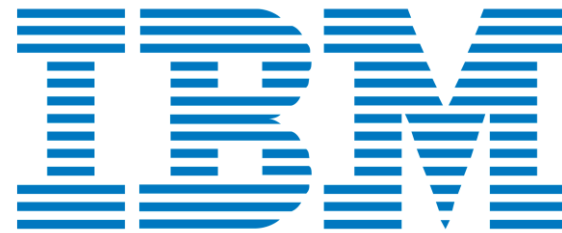
**Transforming how Energy Majors &
Governments Power the World**



*Large, complex and costly projects
the world depends on*



Edward
Abramowich



- Lived in 12 countries
- 30+ years Lean, Agile and Continuous Improvement experience
- Energy, Oil & Gas, Aerospace, Automotive, Technology, Consumer Products, Pharma

Honeywell



Let's Stay Connected!

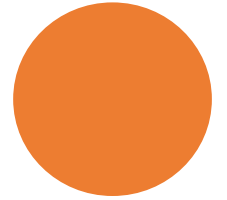
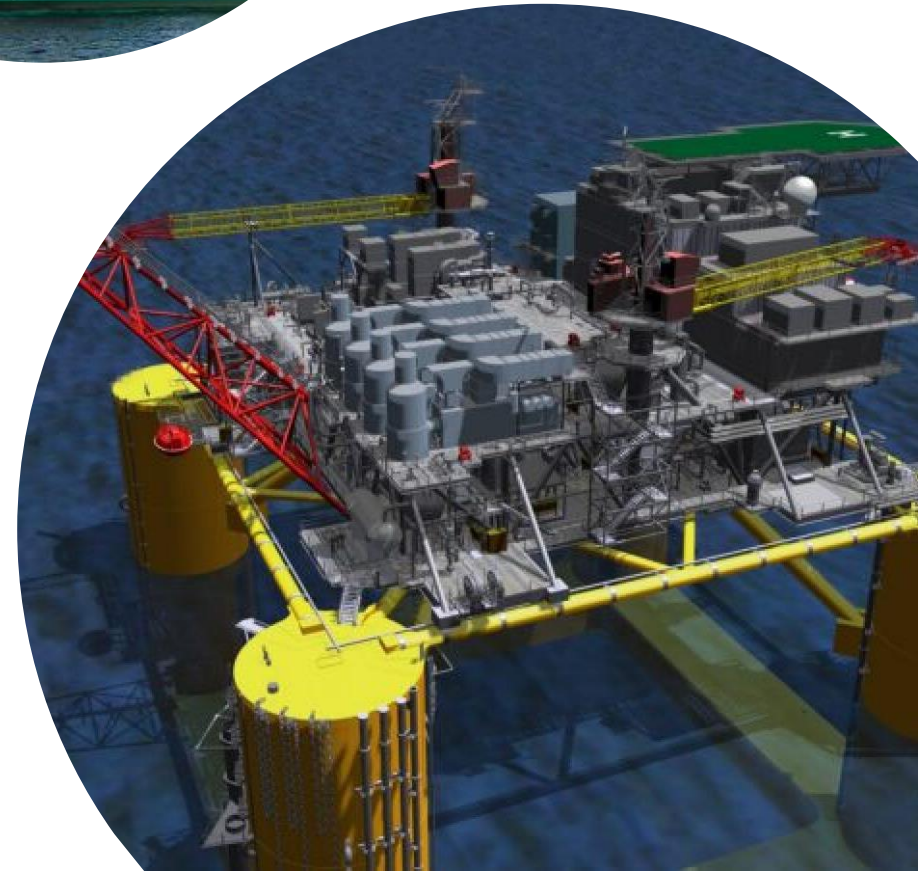
The Fastest and Most Adaptable Wins

Agile is a new approach to capital projects that offers Energy Majors and Governments a way to revolutionize the energy industry

Delivering Transformational Business Impact

1. **Schedule Improvements**
Every day delay means huge revenues lost, millions per day
2. **CAPEX Reduction**
Billions of dollars
3. **Productivity Improvements**
Twice the work in half the time is easily achieved
4. **100% HSE, Quality & Sustainability**
Engineered & built to avoid catastrophe

Currently, projects cost billions of dollars and take years to complete

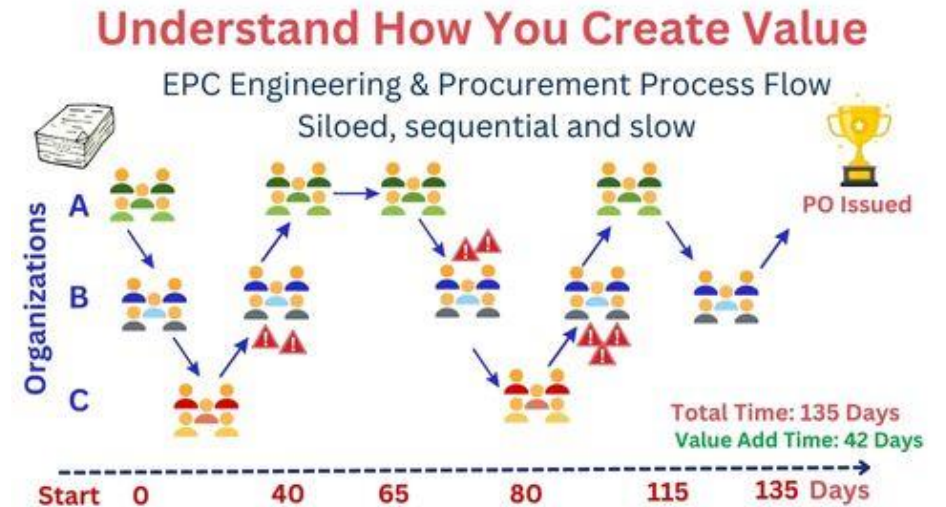


Schedule Improvements

To unlock huge gains and schedule improvements, start by understanding the value stream

- Simplify and streamline processes, removing unnecessary activities. → This makes processes more efficient and easier to manage, frees up resources to focus on more important tasks.
- Eliminate layers, break down silos to create a more agile and adaptable organization → This improves communication and collaboration, makes it easier to make decisions and take action.
- Track decision latency and set deadlines for all decisions, with a goal of making all decisions within hours. → This makes the organization more agile and responsive, reduces risk by preventing decisions from being delayed or deferred.

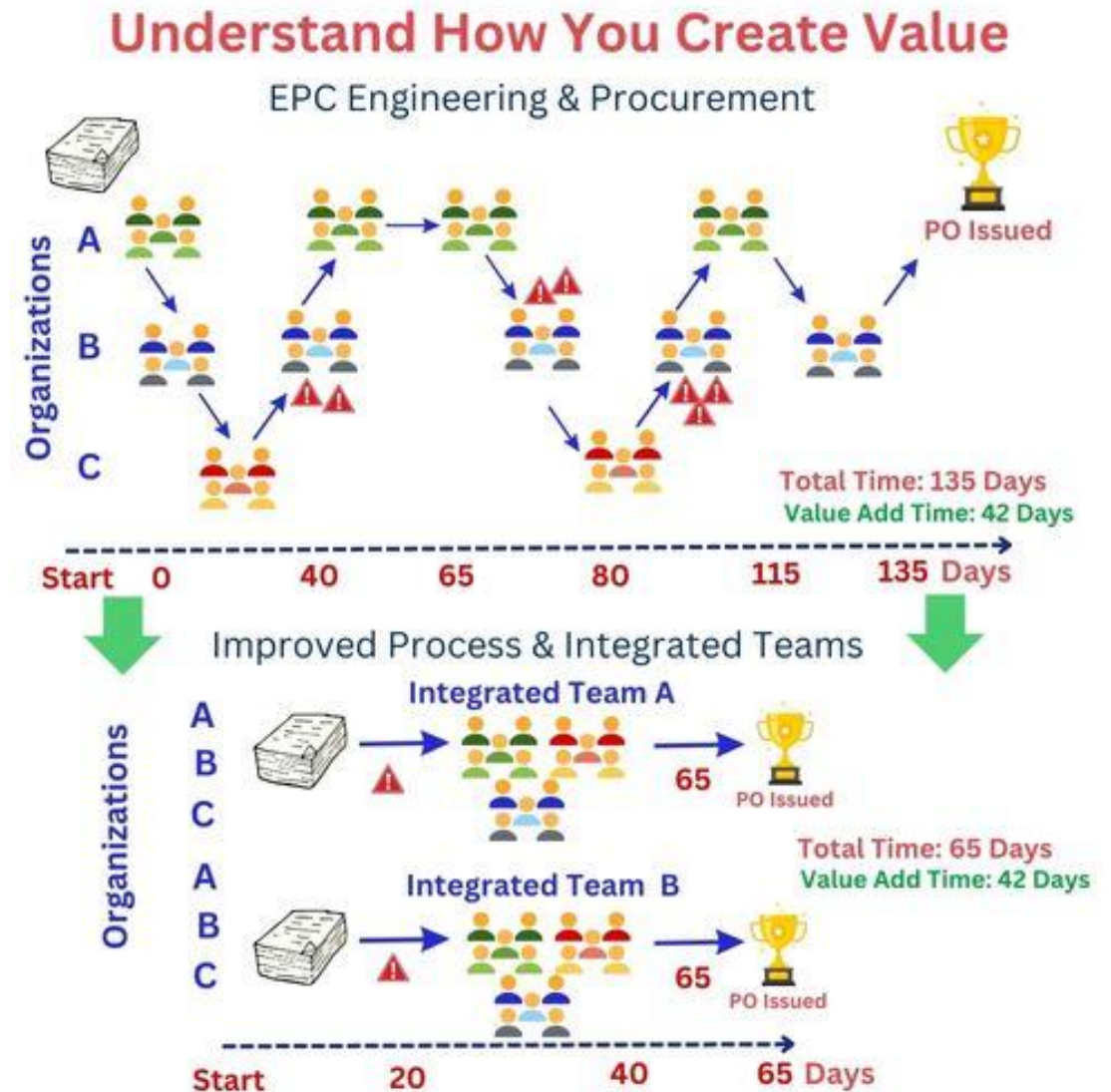
Each day the project is delayed = \$Millions lost



Productivity Gains

Start by simplifying processes, parallelizing workflows, and forming integrated teams to boost productivity

- Create shorter, parallel value streams for speed by forming cross-functional, co-located teams and eliminating all non-value-generating activities.
- Move to a more empowering and collaborative style such as scrum at scale. This gives employees more autonomy and responsibility, create a more positive and productive work environment
- Measure performance, expect radical improvements in speed. Twice the work in half the time is achievable!



Scrum – New to Capital Projects, Big Results

- Different people, from different organizations co-located ➔ **new contracting strategy**
- Scrum masters, Product owners ➔ **new roles, careful selection is required in complex capital projects**
- Increments are project deliverables that clients pay for ➔ **ensure each sprint delivers value to clients**
- Leaders take on a new role ➔ **shifting decision authority to teams requires new leadership models**

If you are not seeing teams becoming hyper productive, you have a problem!



People & Capability Development

Use Agile methods to develop capable people and deal with high staff turnover, skills gaps, and capacity issues

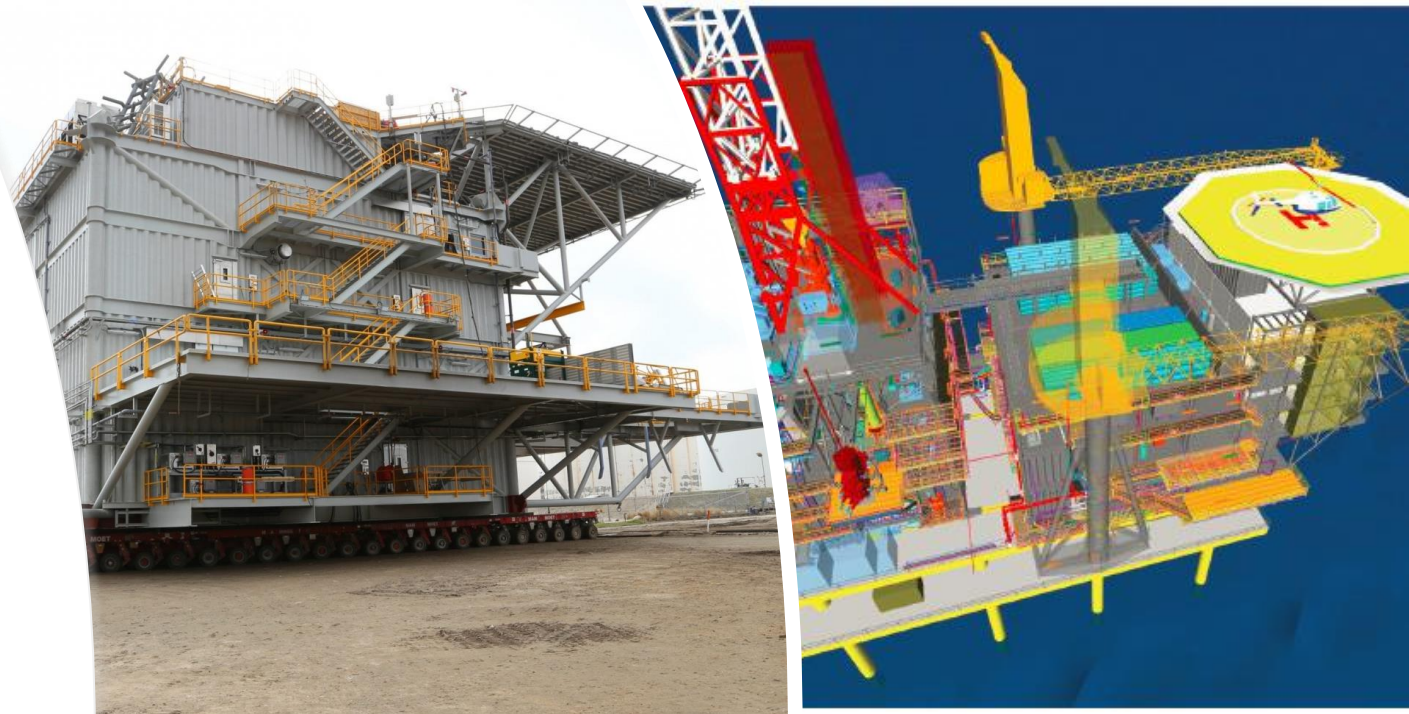
- Focus on team performance through working in pairs, swarming and mobbing
- Breaking down silos means teams must be cross functionally trained ('T-Shaped')
- Developing skills at the same time as doing value added work

Project Phoenix Example:

Schedule Mobbing – 40% Improvement (about 1 year)

Cost Mobbing – 23% Improvement (man hours & Cost)

New staff, varied skills can lead to costly errors!

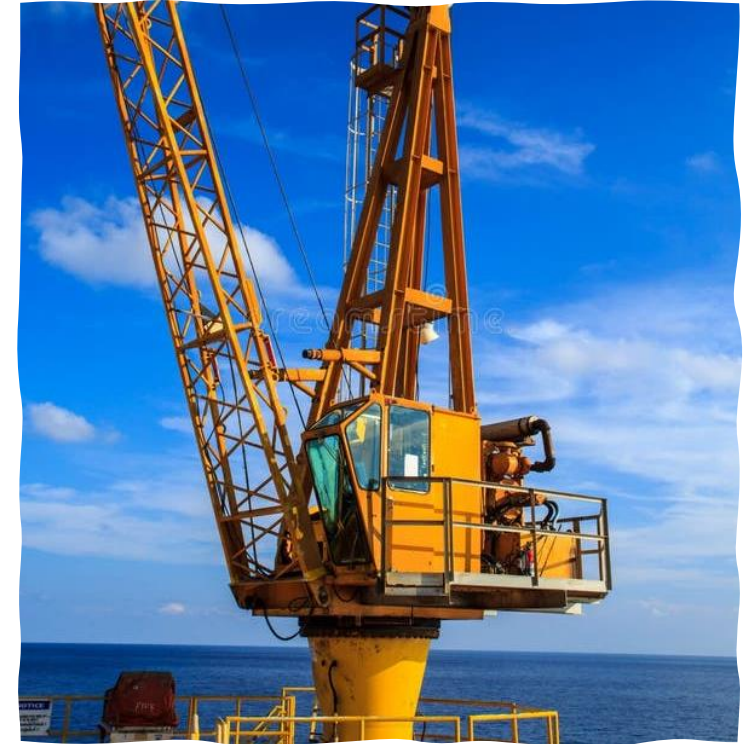
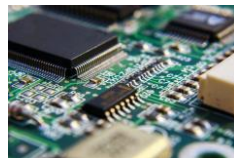


Supply Chain Challenges

Some energy majors are cancelling projects due to supply chain constraints, with suppliers refusing to take their calls

- You can't speed up your supply chain without simplifying and parallelizing value streams.
- Agile methods allow for adaptability, letting you change designs on the fly to take advantage of what's currently available.
- Modularise the designs with stable fixed interfaces

Example for Automotive → Chips



Rapidly adjust the design to take advantage of supply chains, not be constrained by them

New Structures and Ways of Working for Speed & Adaptability

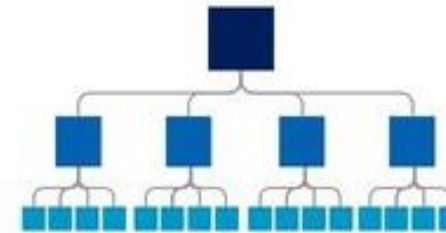
Adapt into the new model and learn from it. If your business outcomes don't improve significantly, adjust your approach

- Agile and traditional project management models are incompatible
- Dual operating systems are usually the most feasible option
- Teams of teams will be the future of work, but only if they leverage technology extensively (e.g., AI, digital self-management).

Organisational Structures

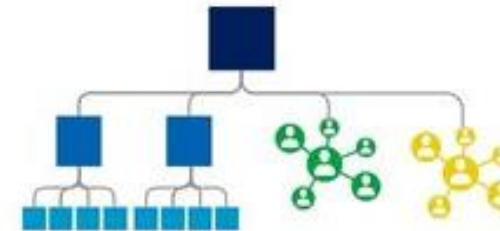
Different structures, each with benefits and challenges

Top Down,
Hierarchical



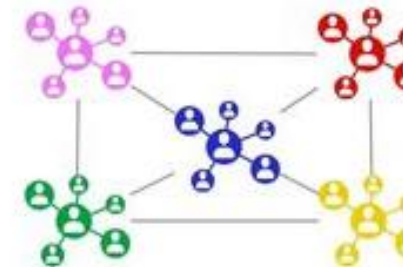
Slow, sequential & siloed

Dual Operating
System



Organisation with
two models

Team of
Teams



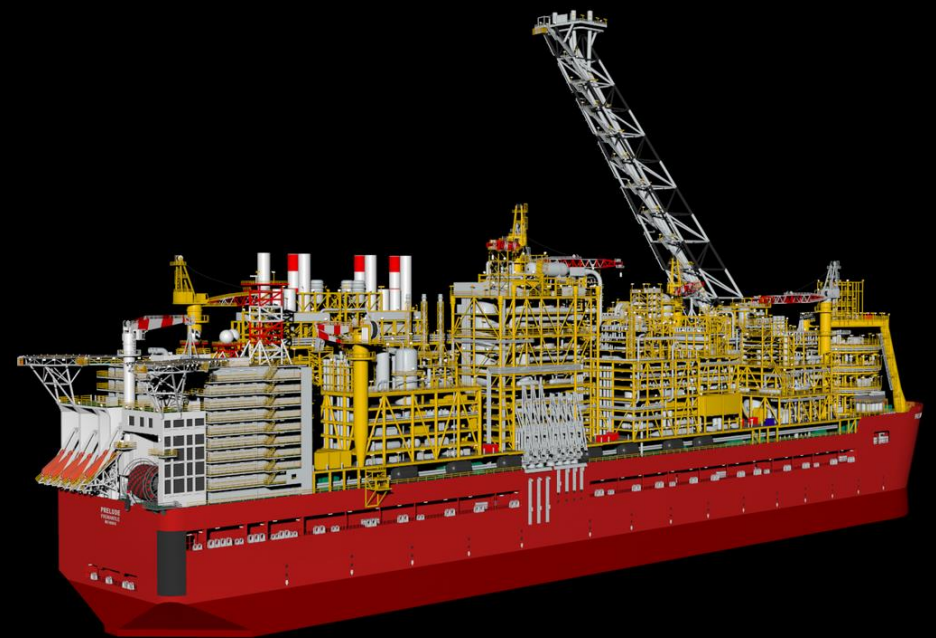
Fast and adaptive

Leadership Development for Better Project Outcomes

Past methods are no longer sufficient. Leaders need new approaches

- Get help from an experienced Agile coach who knows about capital projects.
- Reduce management, increase value creation.
- Use digital self-management and AI to automate decision making and reduce the number of organizational layers.
- Leaders should always be asking themselves, "What is slowing us down and getting in our way?"

"No Problem is a Problem". Leaders must hunt for and act on opportunities to accelerate





What is Speed in Capital Projects?

Giga Shanghai - From empty plot of land to first car produced within 12 months

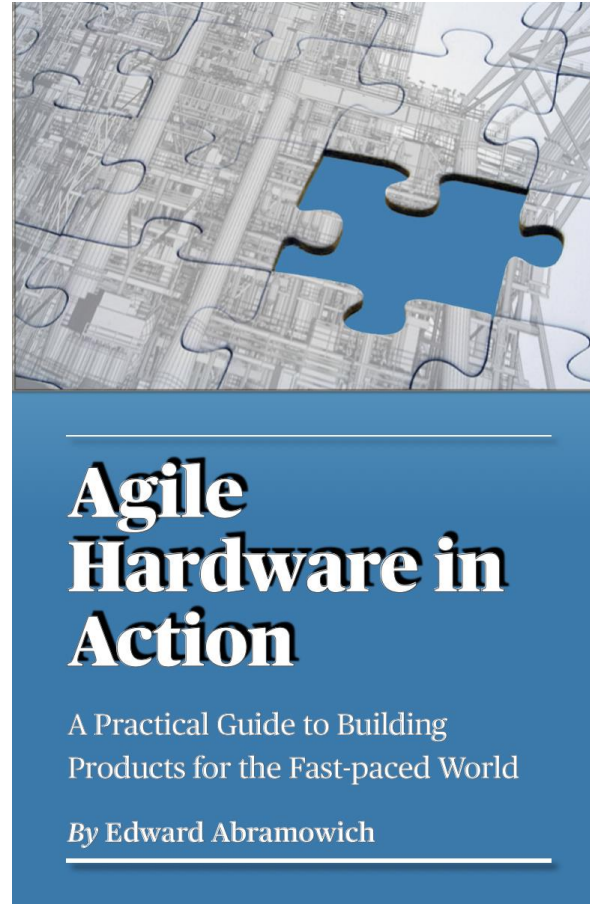
Giga Berlin – 18 months

They are working as a team of teams. It is time for us to make it work in the Energy Industry!

Join the Energy Transformation!

Published using Agile principles

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- Actively engaging people, getting feedback and learning about best practices
- Participate to help the worlds energy transition!



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