

Functional Safety 2035

Do we have a functional safety problem to solve in the existing capital-intensive industrial infrastructure?

- or -

Adapting to have safe plants in a rapidly changing environment

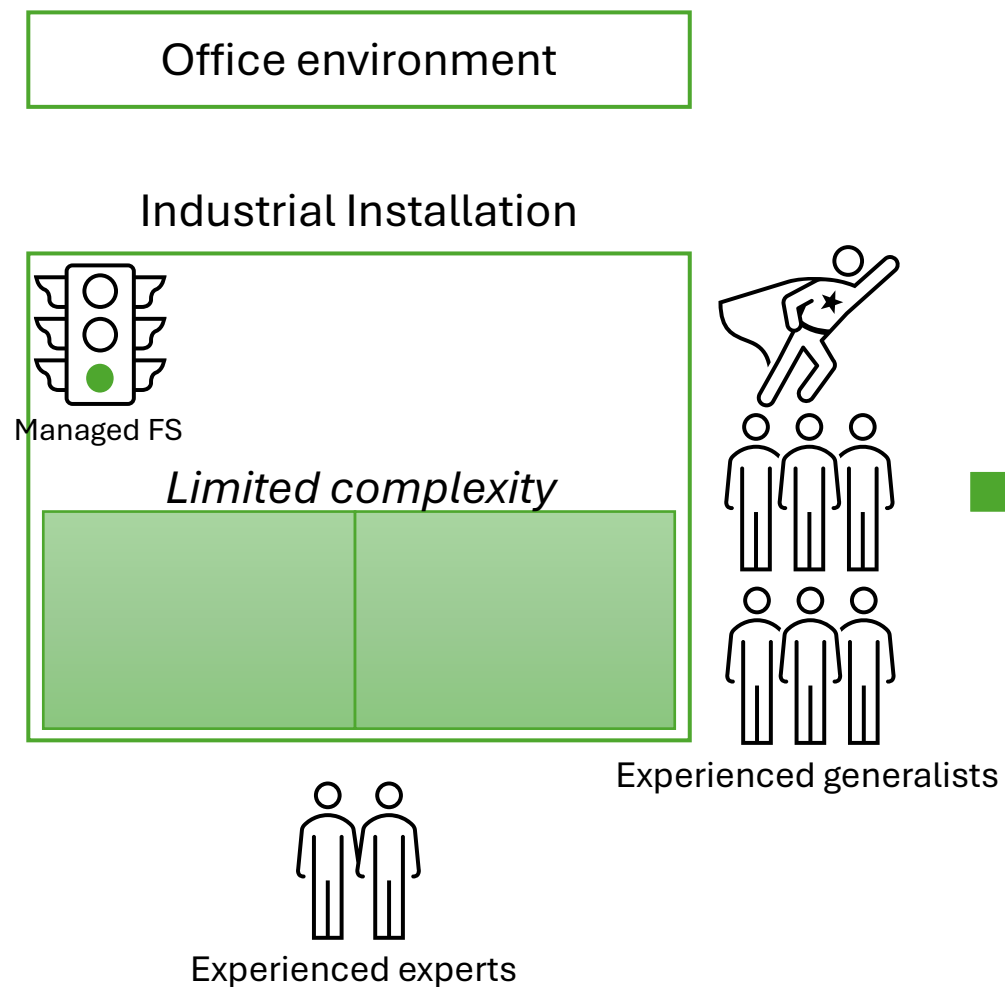
February 5th, 2025

Functional Safety 2035

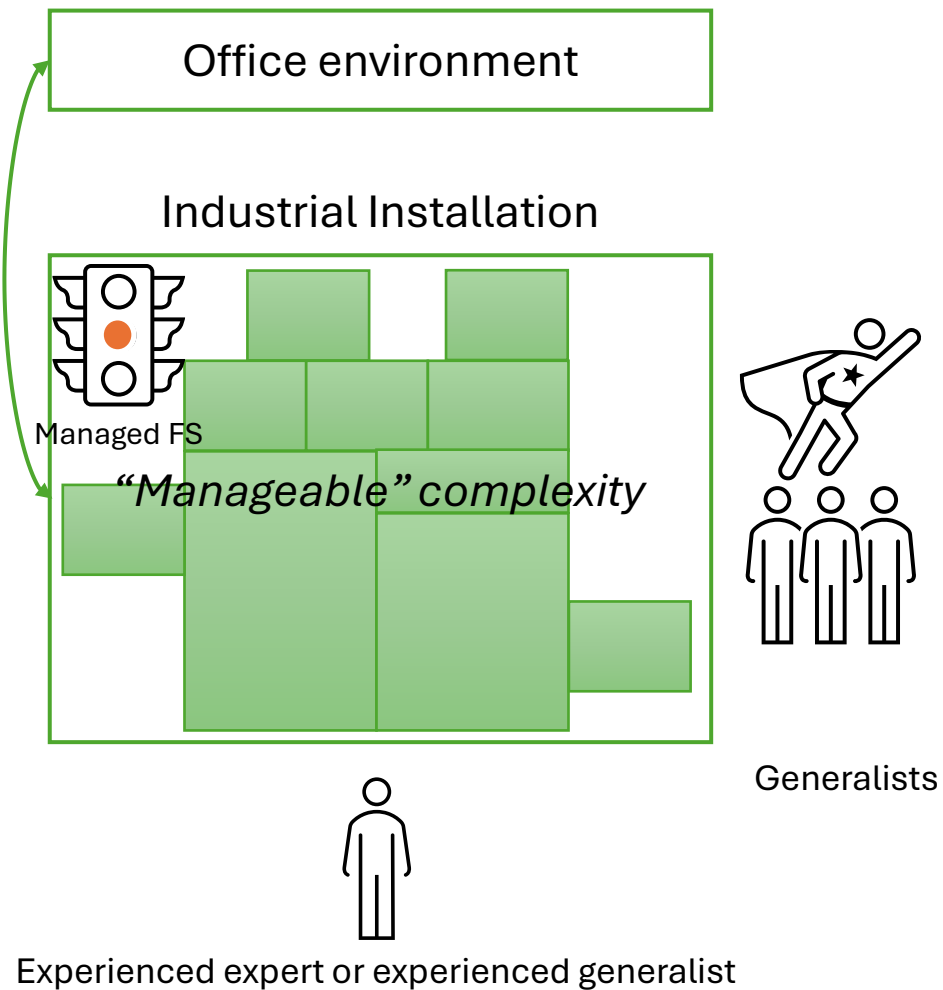
- Current state
- Future state?
- Options
- Future of Functional Safety
- So what?
- Questions & discussion

Current state

Where we started

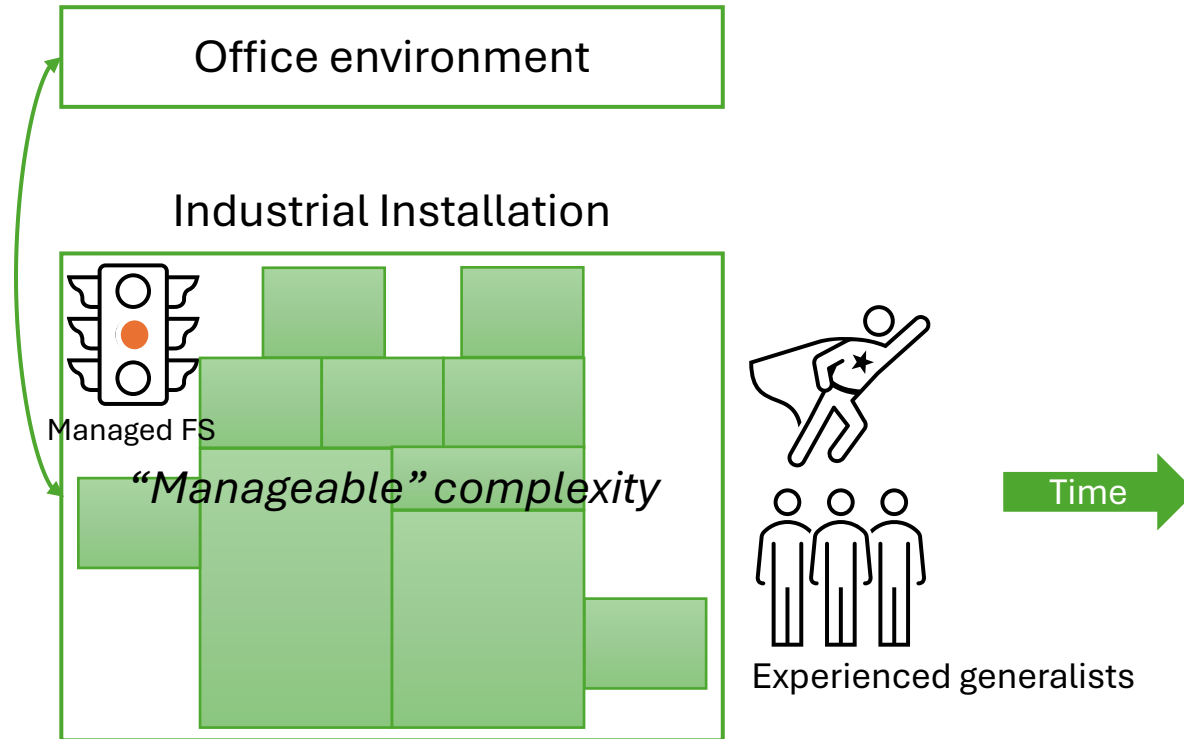


Where we got to over time

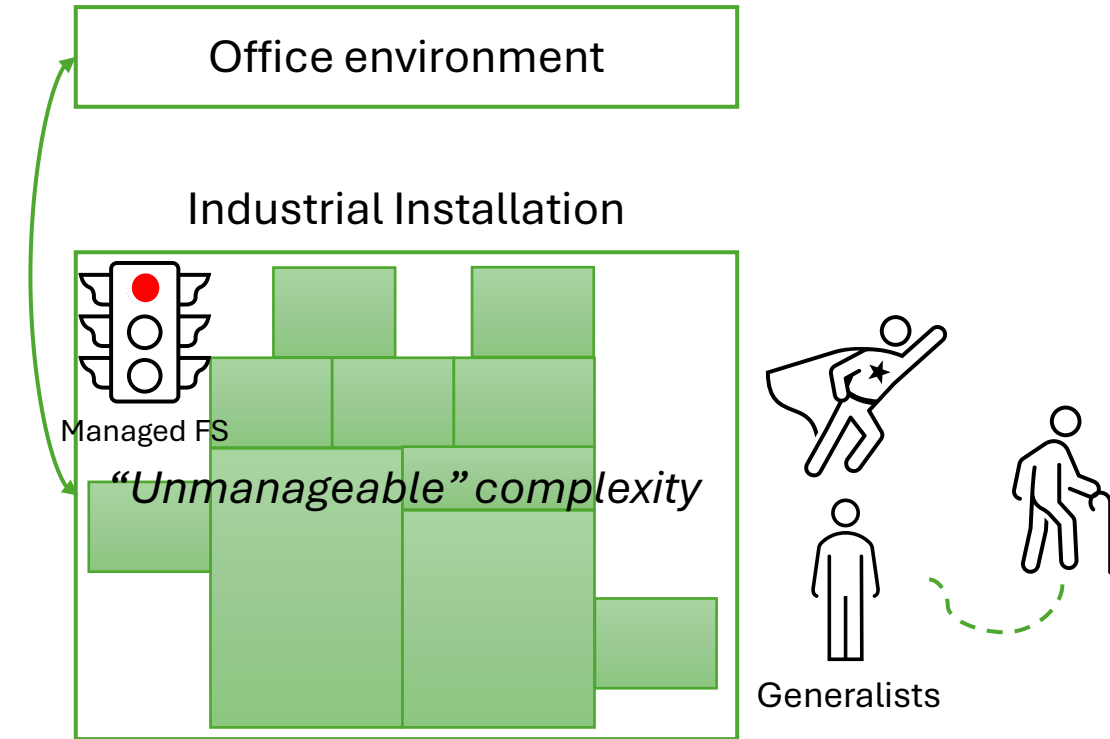


Future state?

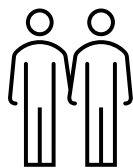
Where we are



Where we might evolve to



Can we ensure the appropriate level of functional safety if we do not change current practices?



Experienced experts or experienced generalist

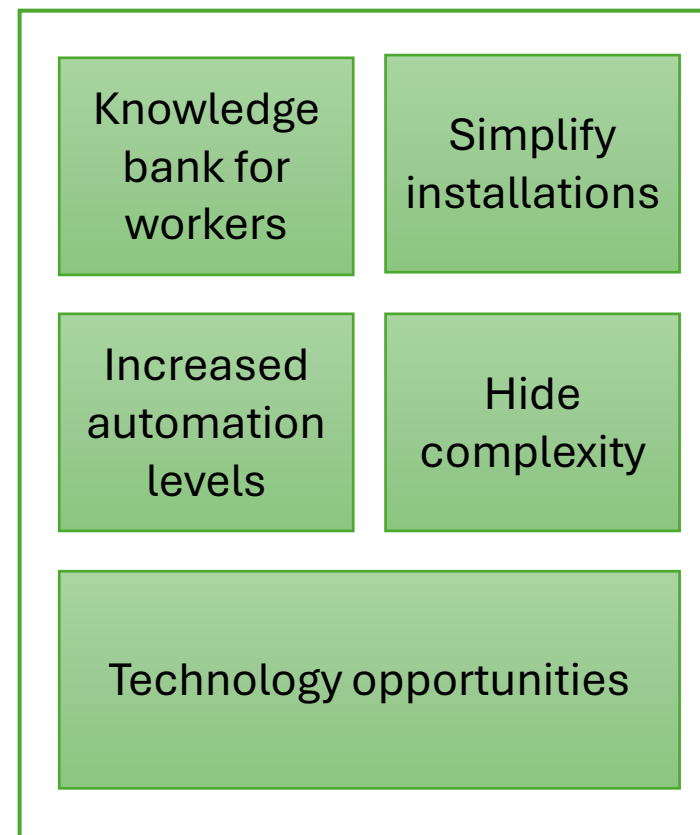


Experienced generalist

Options?

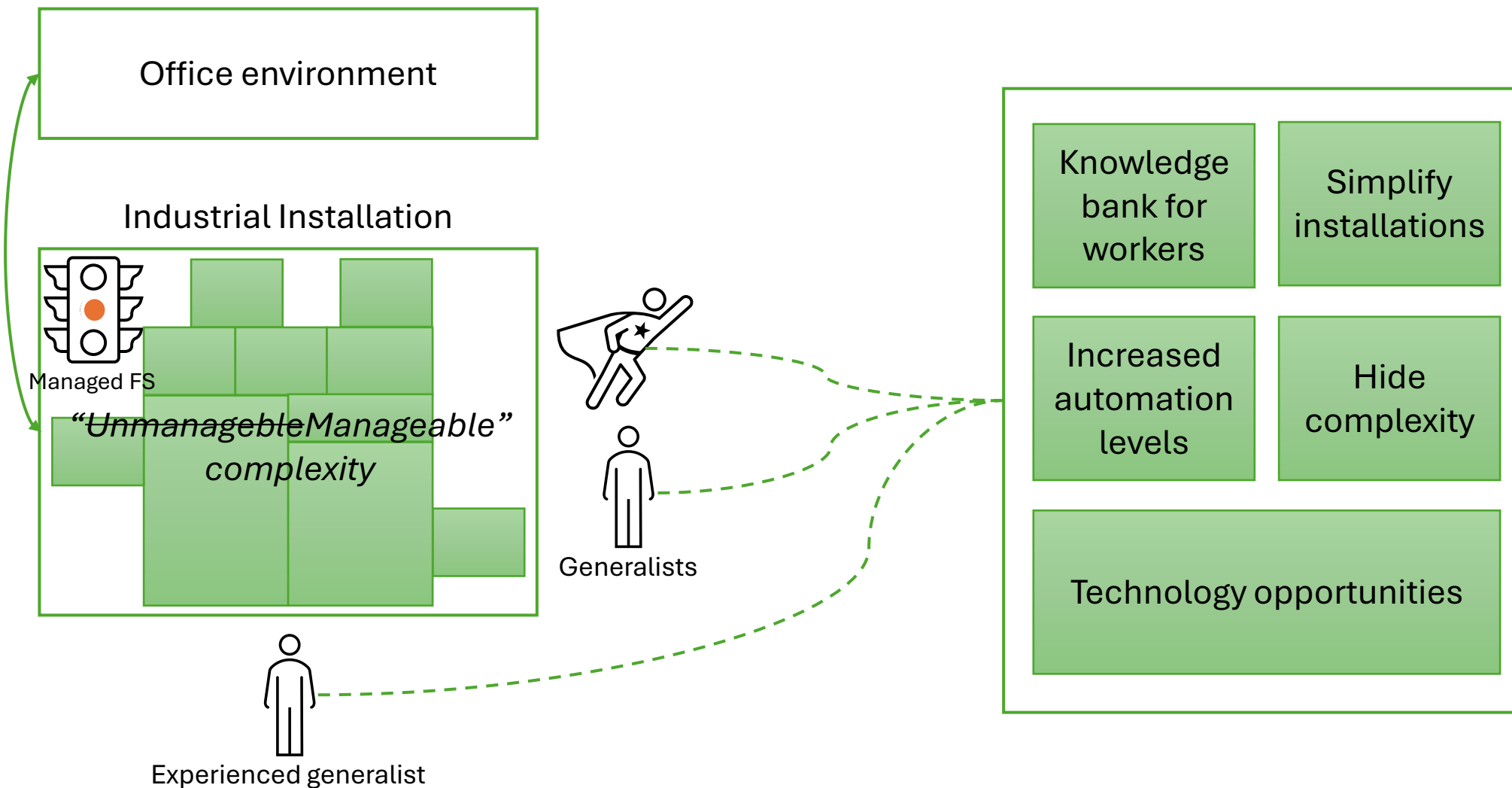
Possible mitigations for potential reduced Functional Safety regulatory compliance?

- More automation
- More technology
- New technology
- Support tools replacing or extending experience and expertise



**Can technology replace lack of skills? Can technology make an unqualified worker a qualified worker?
Is this even economical and sustainable model?**

Future of Functional Safety?



So what?

- Everything looks simple from 10000 feet ... but the devil is in the details
- Newer technology like reasoning models (AI) can help, but how can those technologies be assessed using IEC 61511 and other (regulatory) standards
- Can tools really replace expertise or experience?

Thank you!

