Existing Roles & DT Technology

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Topics

Scope of presentation

- DT lifecycle stages *- the 'joined-up' approach*

- Relevance of V&V *- Validation (doing the right thing – requirements' coverage)*

  & Verification (doing things right – build what's required)

- Implementation *- how it can be achieved*

- Other Sources *- where to find more information*

- Summary

Scope

This is a 'helicopter-up' view of how DT technology can be approached by utilising a company's existing skill-base.

What it is:

- A look at commonality with existing company practices, rather than what is different.
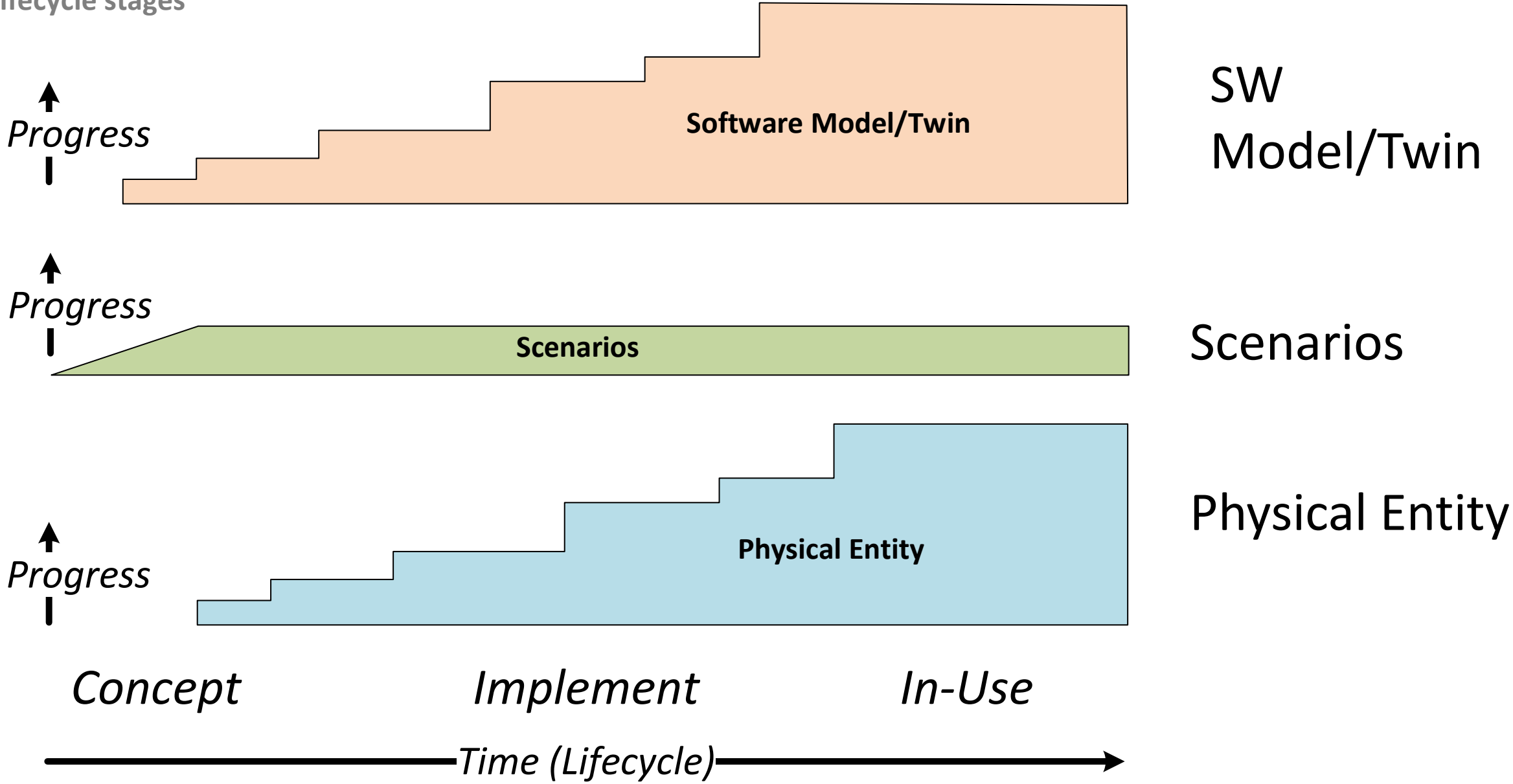
What it is not:

- A magic tool or service to make something easier.

Intention:

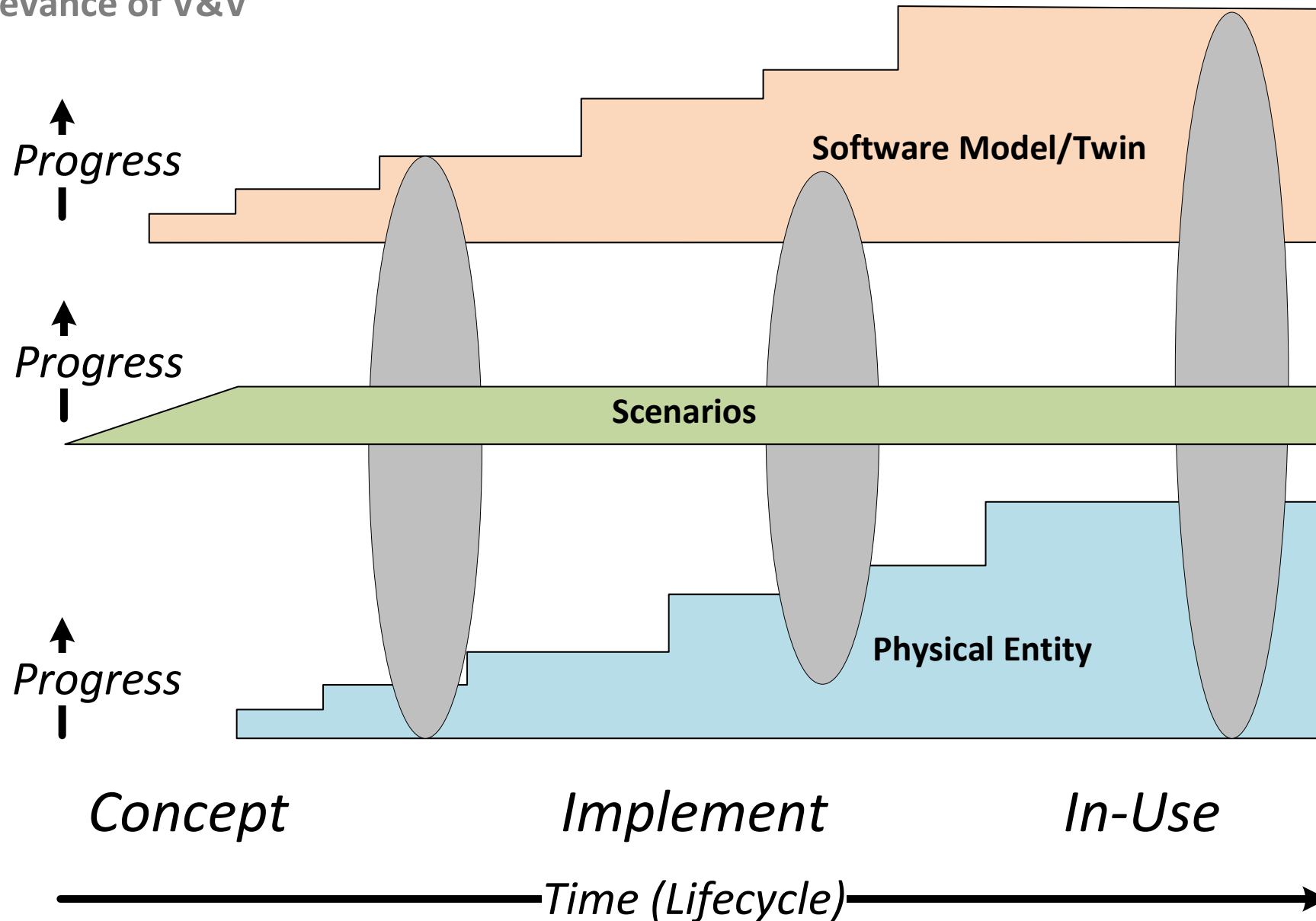- To stimulate wider thinking & debate about implementing DT technology.

Lifecycle Benefits of Digital Twin Technology

DT lifecycle stages

Progress

Software Model/Twin

SW Model/Twin

Progress

Scenarios

Scenarios

Progress

Physical Entity

Physical Entity

Concept   *Implement*   *In-Use*

Time (Lifecycle)

Lifecycle Benefits of Digital Twin Technology

Relevance of V&V

Scenarios should run as expected with any mix of modules from the model or the physical entity.

Implementing it – Expanding the role of Test Engineers'

- This scenario-dependency creates the opportunity for Test Engineers to be deeply involved throughout the lifecycle to:
  - ♦ *Run scenarios, record test results and check for discrepancies.*
  - ♦ *Communicate with all stakeholders to collect and document perceptions, objectives, timescales and progress etc.*

- This is valuable project management information and can facilitate fast response to issues arising *(minimising costs).*

- *Not only is it valuable to the project, it enhances the role of Test Engineers - with minimal additional training.*

Some Other Information Sources

- **DT Hub** has published wider-ranging documents about DT Skills – notably:
    - **Skills & Capability** *Framework and Capabilities.*

    - **Defence Digital Network** *Thoughts re Skills for Dig Transformation.*

- **IET** (Institute of Engineering & Technology) has, for some time, been promoting the role and image of Test Engineers.

- **ITEA** (International Test & Evaluation Assoc. - UK) is considering an in-depth review in this area.

The **Real-Time Data**
Company Ltd.

Summary

- DT Technology does not necessarily mean big change – 'tweaking' existing roles is a good way to start a cost-effective implementation.

- To stimulate wider thinking and the debate:

  - *What roles in your organisation could be extended in a similar way?*

- Please share your thoughts by contributing to the debate on the DT Hub's website (e.g. Defence Digital Network and elsewhere).

  - A more in-depth presentation can be found here:

  https://digitaltwinhub.co.uk/forums/forum/95-documents/

Thank you for your time and attention….

Please ask, or contact me, if you have any questions:

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