



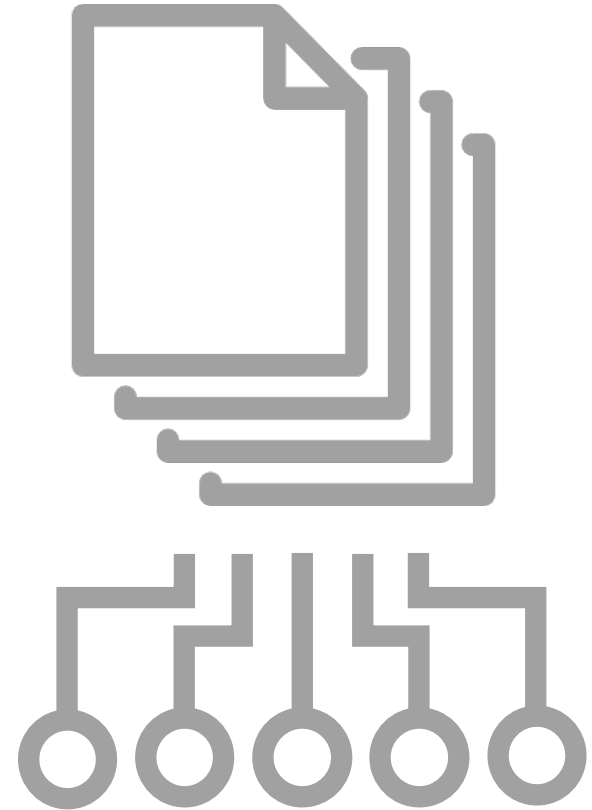
Advancing The Digital Thread Throughout The Lifecycle

Kenney Crooks
NG Fellow

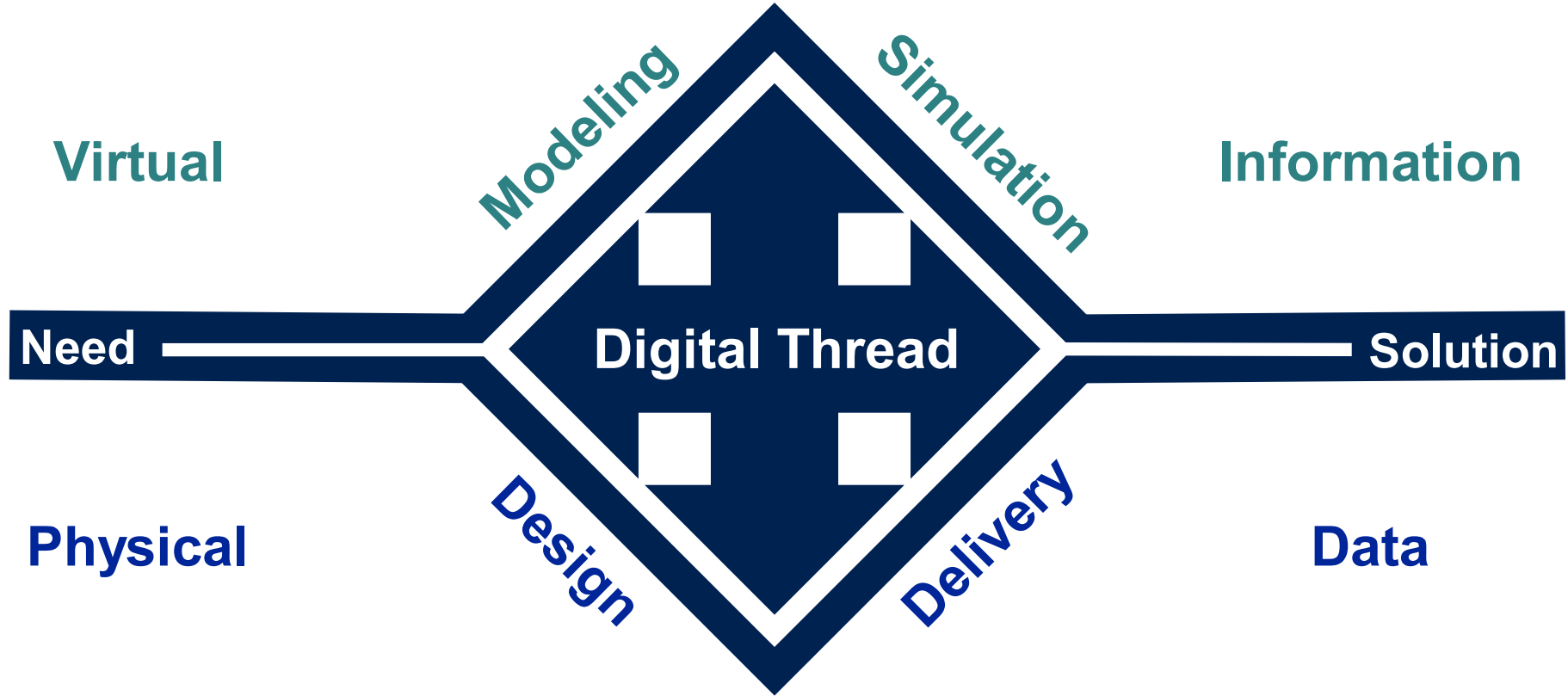
06/01/23

Digital Transformation

- Develop robust Modeling and Simulation capabilities for the entire life cycle
 - Drive innovation for information and insight
 - Improve operational excellence
 - Increase collaboration and experience
- Promote data reuse from design to operations and maintenance through the Digital Thread
- Evolve to Model Based and Model Centric approaches with Digital Technologies



Digital Twin



Our Plan to Transform

Bringing Sustainment to the left in design and integrating with Engineering

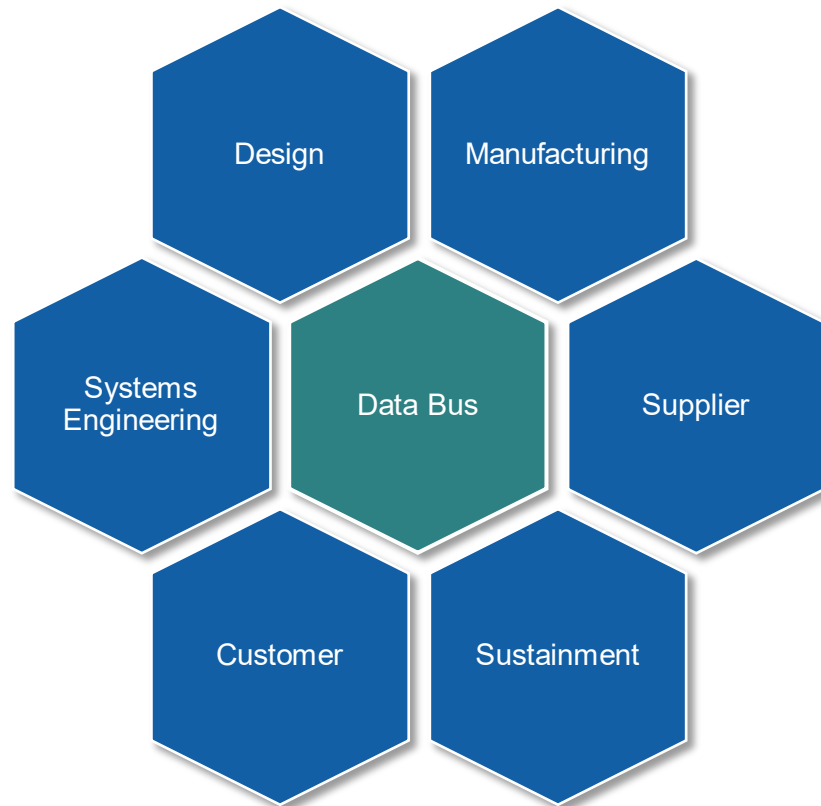
- Improve availability, supportability, maintainability and reduce rework
- Drive efficiency, affordability, and agility through data integrity and re-use

Develop Product Support Digital Backbone

- Established connectivity throughout life-cycle
- Define governance and traceability

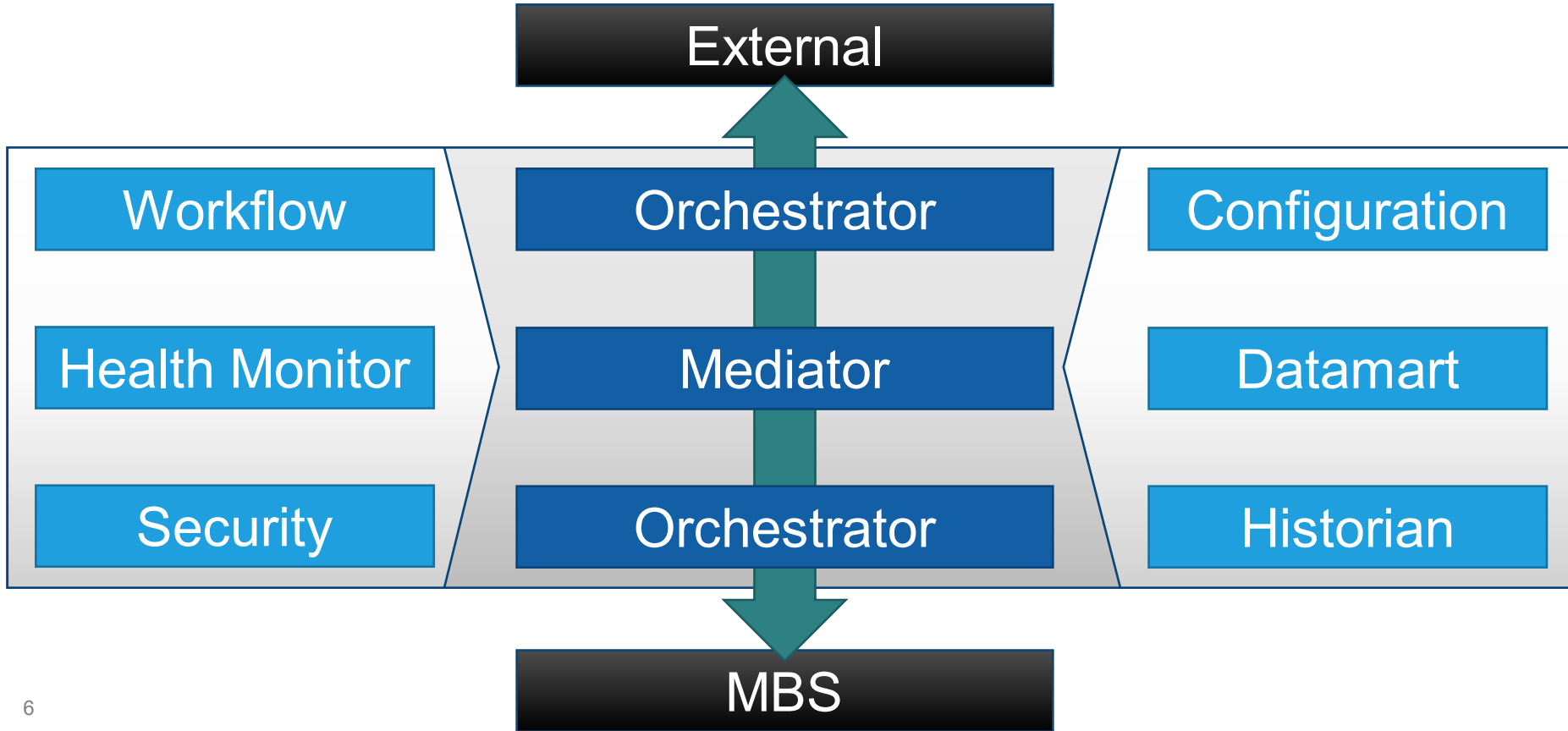
Provide Continuous Improvements to our Customers

- Establish robust CBM+ and XR capabilities
- Increase Technical Data and Training throughput
- Increase visibility to Fielded Performance and Supply Chain



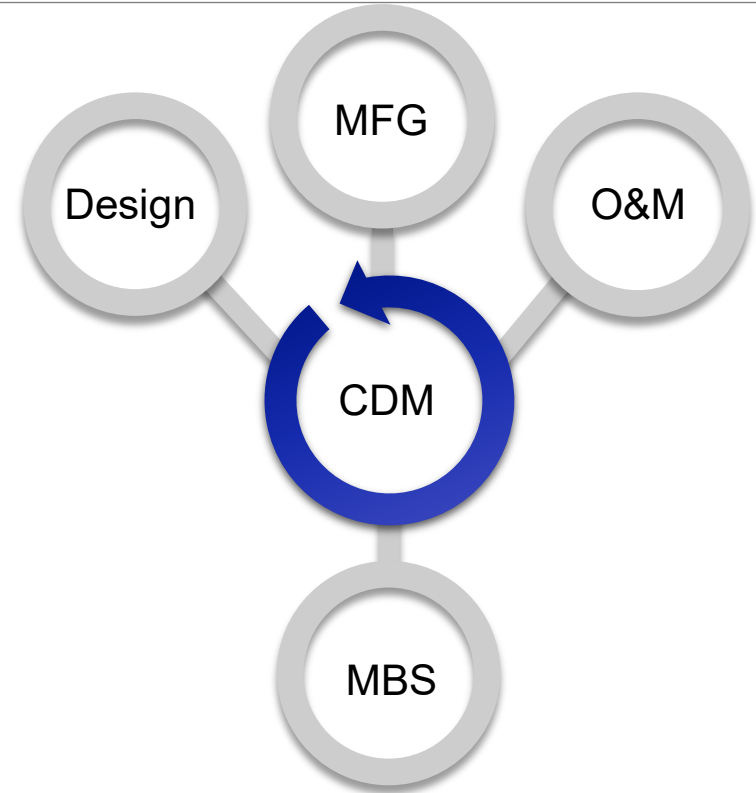
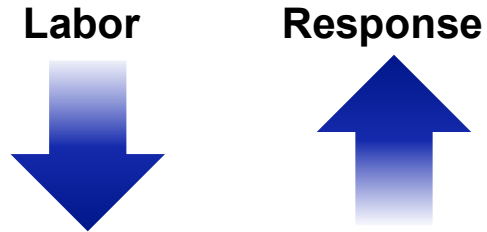
Improve total data quality of our systems' life cycle

Technical Stack – Digital Backbone



Enable Common Data Model (CDM)

- Integrate multiple data systems
- Adapt to industry innovation
- Reduce custom solutions
- Increase data integrity and re-use
- Change Management Visibility
- Distributed Analysis and Result



Through Automation: Swing efforts from Data Management to Analysis and Result

Conclusion

- Model Based, Data Driven and Centralized
- Strong foundational definition of the digital thread for Sustainment
- Improve quality by avoiding duplicate efforts
- Reduce labor, Increase response
- Promote greater data reuse and analysis collaboration
- Proactive approach to mitigate unknown design constraint effects
- Higher visibility of causality to operations & maintenance gaps