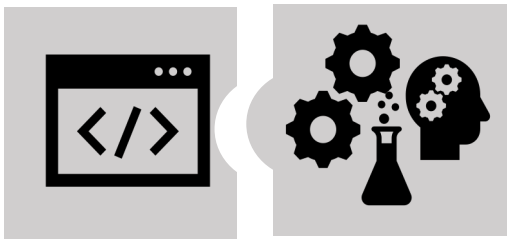


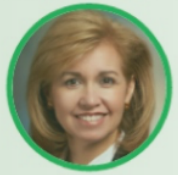
Dynamic Integration of Knowledge

Third Annual Texas Gulf Coast Chapter Systems Engineering 2019 Conference

Javier Canon (MAANA)

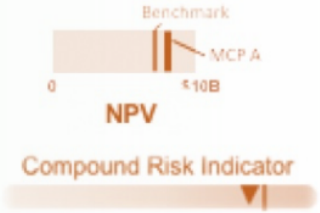
The Faces of Knowledge

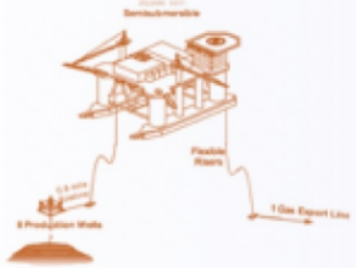
High Potential



Kit Granados
Project Director

- Long decision-making cycles
- Siloed knowledge
- No comprehensive benchmarking
- Latent risks





- Constant need to re-do engineering work
- Not enough QA
- Keeping up with Central Engineering

Mercenary

Hua Shen
Lead Process Engineer

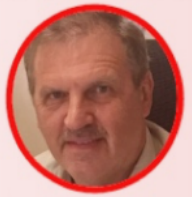
Guardian of the Temple

Luca Eklund
Central Engineering Authority

- Knowledge is escaping our company
- Don't have enough leverage
- Not enough time, not enough rigor

- Lack of standardization leads to Ops risks
- Not sufficient leverage in Design Phases

Good Old Technician



David Joyner
Offshore Installation Manager

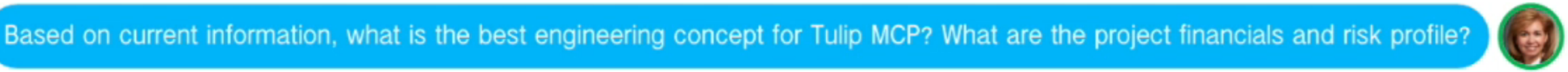
Imagining the Possibilities

I'm learning about oil & gas major capital projects…

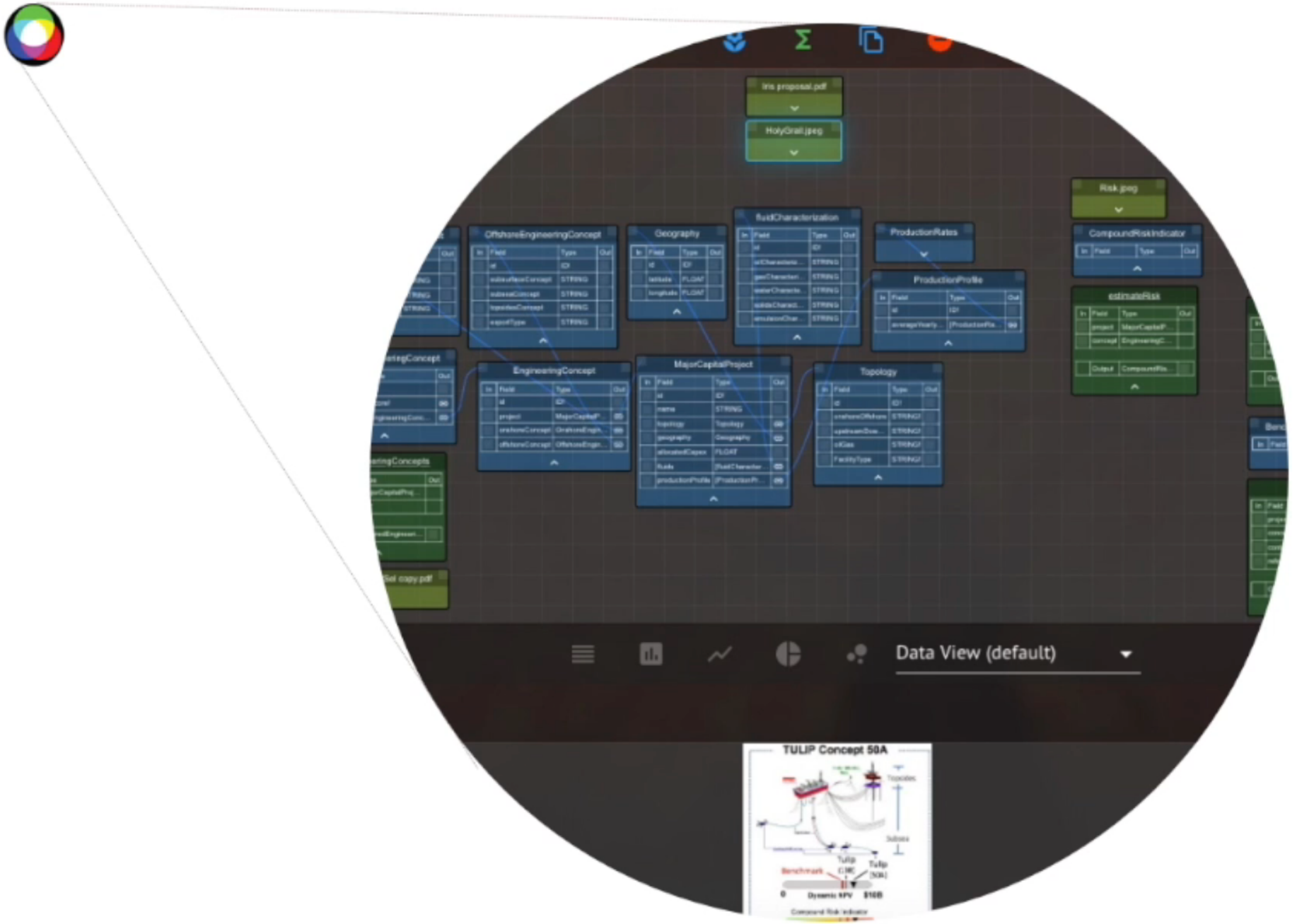
I've started integrating siloed knowledge from different parts of our organization and the industry…

Want to see how that can support decision making? Try asking me a question…

Based on current information, what is the best engineering concept for Tulip MCP? What are the project financials and risk profile?



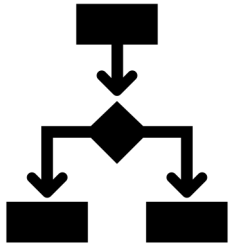
A Computational Knowledge Graph as a Backbone



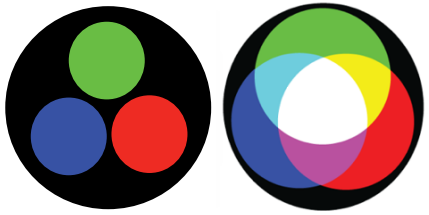
A Bridge between Physical Sciences and Digital Domains

Computational Knowledge Graphs and **Systems Engineering**

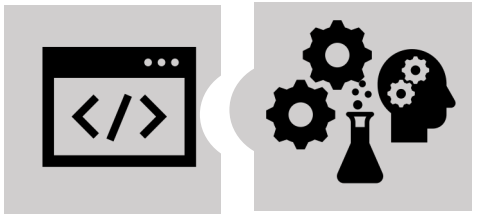
Top-Down Approach
(Interconnectedness)



Global vs. Local Optimization
(System vs. System-of-Systems)



Multi-Disciplinary Collaborative Environment
(Common language / Bridging Digital Divide)



Lifecycle Digital Thread