Complexity ≠ Complication
- Transparency
- Inspection
- Adaptation
INDUSTRIAL MANUFACTURING

- Agile approach to design and testing based on customer-driven problems:
  - Apply X lbs/acre at 12.5 mph
  - Response time < Y secs
  - Cleanout in < Z mins
  - Existing chassis constraints
- Results in learning of design flaws a year in advance of status quo
“YOU SOLVE ONE PROBLEM, AND THEN THE NEXT ONE. IF YOU SOLVE ENOUGH PROBLEMS YOU GET TO COME HOME.”

Mark Watney
ABOUT ANY SUBJECT . . .

“SOURCE OF BREAKDOWNs”

We know
We don’t know we don’t know
We know

“SOURCE OF BREAKTHROUGHS”

PREDICTABLE

OIL AND GAS MEGA PROJECTS

- Engineering, procurement, construction of 3 NG processing plants
  - Reducing costs of delay
  - Iterative/incremental learning and execution towards exceeding predictable.
- Results in 10% under budget and online 30-180 days early
ALIGN CULTURE WITH AGILITY

- Focus requirements on value
- Challenging status quo
- Comfort with risk and ambiguity
- Trust and support
- Healthy conflict and debate
- A learning mindset
“THE GREAT DISCOVERY THAT LAUNCHED THE SCIENTIFIC REVOLUTION WAS THE DISCOVERY THAT HUMANS DO NOT KNOW THE ANSWERS TO THEIR MOST IMPORTANT QUESTIONS.”

Yuval Noah Harari