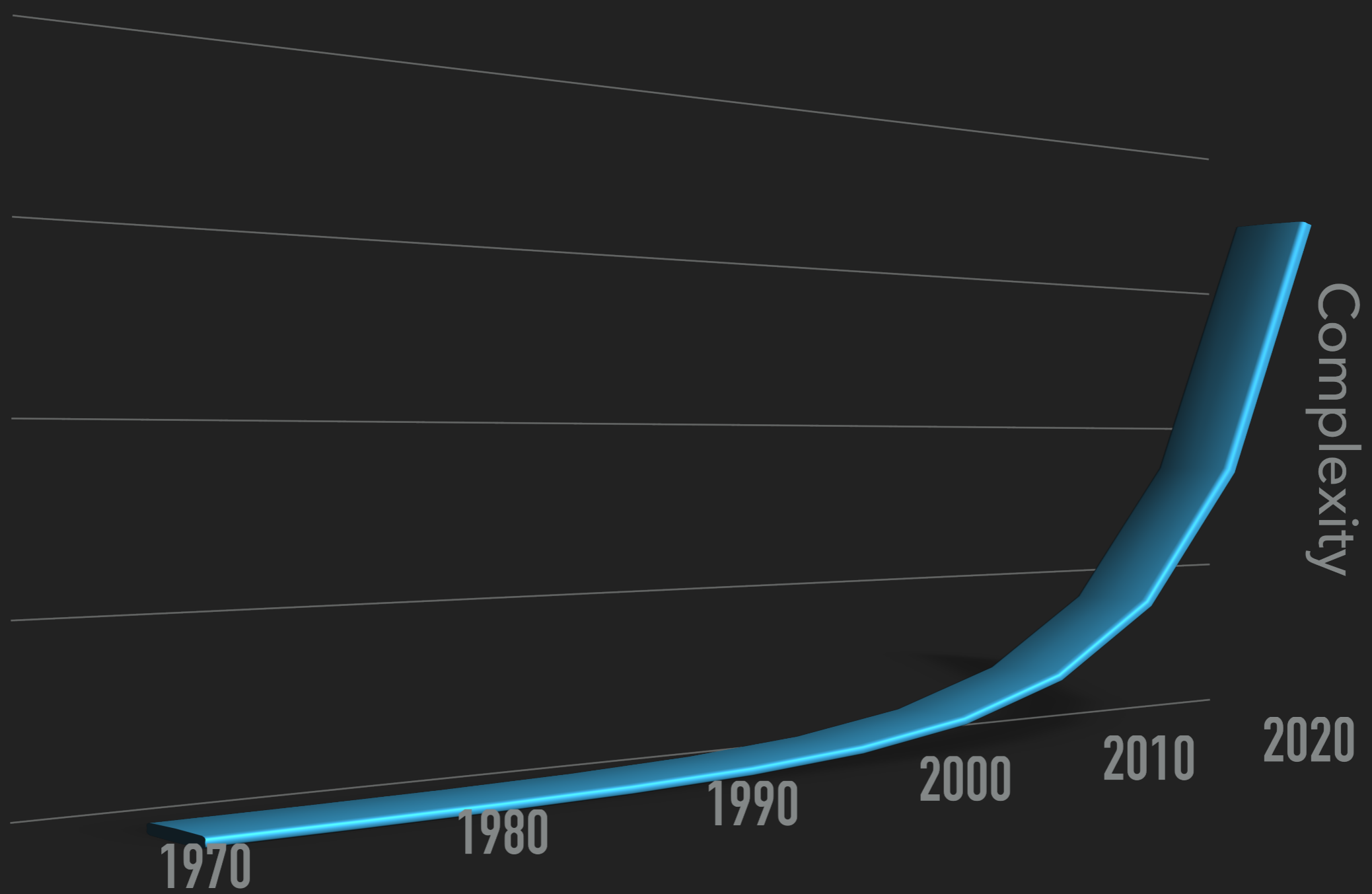# IEEE RE CONFERENCE 2018

INTO THE UNKNOWN

Complexity ≠ Complication

Complex
Unknown unknowns

Probe-Sense-Respond

Emergent Practice

Complicated
Known unknowns

Sense-Analyse-Respond

Good Practice

Chaotic
Unknowable unknowns

Act-Sense-Respond

Novel Practice

Obvious
Known knowns

Sense-Categorise-Respond

Best Practice

The Cynefin Framework
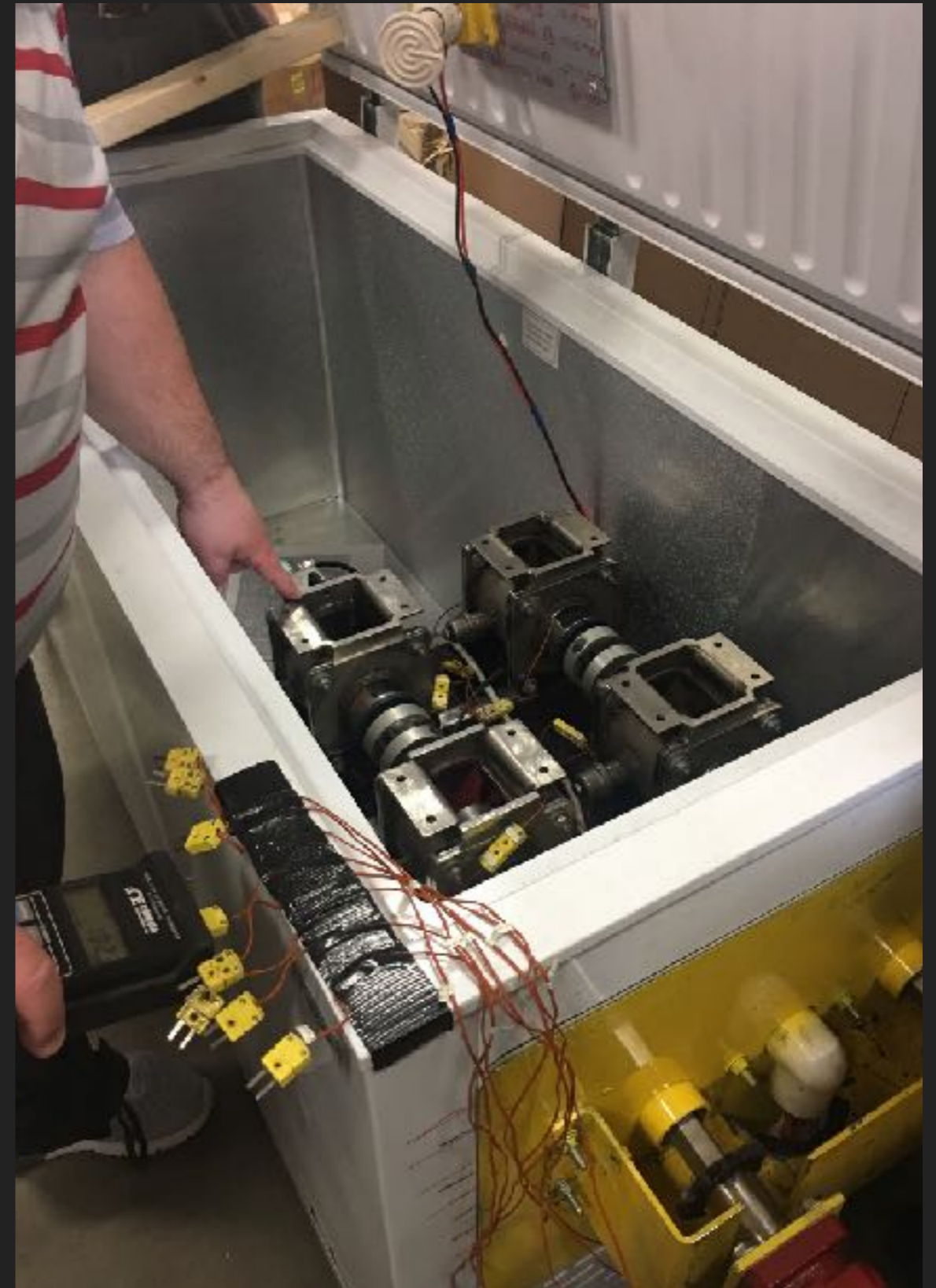*by Dave Snowden*

▸ 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

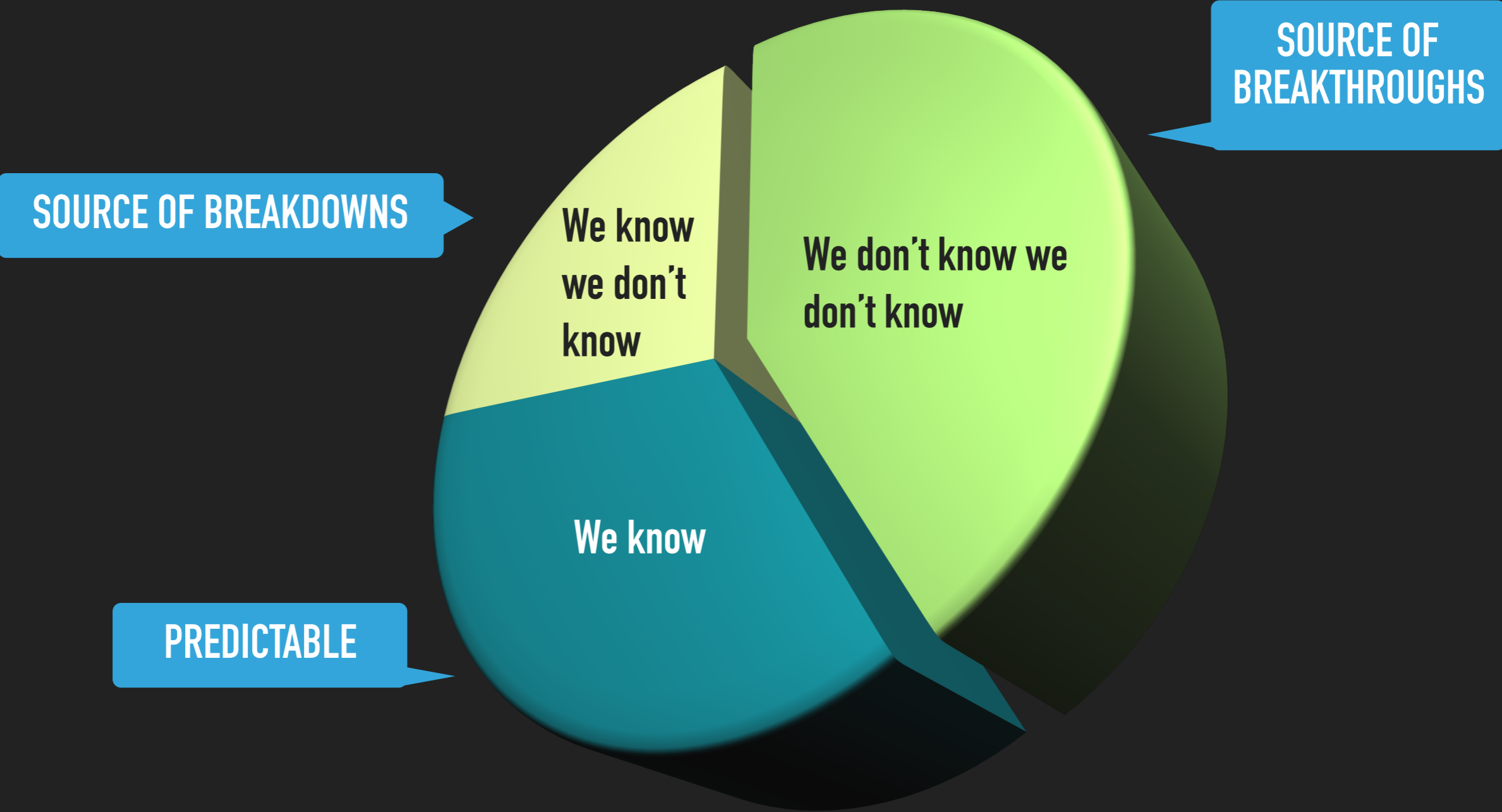▸ Results in learning of design flaws a year in advance of status quo

THE MARTIAN
ANDY WEIR

A NOVEL

"YOU SOLVE ONE PROBLEM, AND THEN THE NEXT ONE. IF YOU SOLVE ENOUGH PROBLEMS YOU GET TO COME HOME."

Mark Watney

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
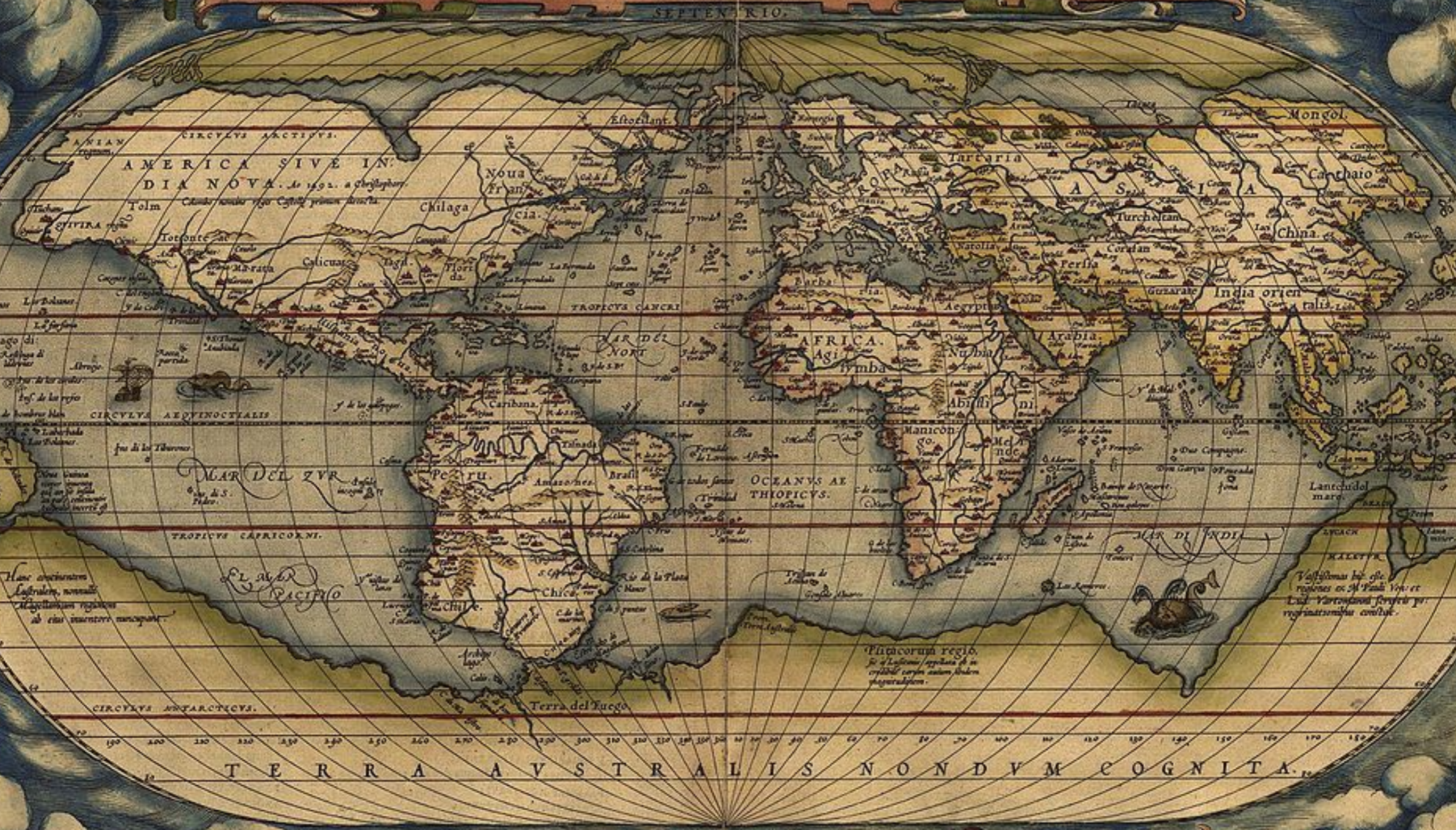
▸ Healthy conflict and debate

▸ 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

TYPVS ORBIS TERRARVM.

SEPTENTRIO.

CIRCVLVS ARCTICVS.

ANIAN regnum

AMERICA SIVE IN: DIA NOVA. Anno 1492. a Christophoro

CIVIRA

Tolm

Totonte

Chilaga

Noua Francia

EVROPA

TARTARIA

ASIA

Mongol

Cathaio

Turcheltan

China

Calicuar

Florida

La Bermuda

Natolia

Cordan

Persia

Guzarate

India orientalis

TROPICVS CANCRI

MAR DEL NORT

AFRICA

Agi:

Aegyptus

Arabia

Nubia

Abissi

CIRCVLVS AEQVINOCTIALIS

Caribana

Trinidad

Manicon go.

Melinde

Ando

MAR DEL ZVR

Peru

Amazones

Brasil

OCEANVS AE THIOPICVS

TROPICVS CAPRICORNI.

EL MAR PACIFICO

Chile

Chica

Rio de la Plata

Terra del Fuego

Lantchidol mare.

MAR DI INDI

MALETVR

Psitacorum regio.

CIRCVLVS ANTARCTICVS.

190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180

TERRA AVSTRALIS NONDVM COGNITA.

MERIDIES.

QVID EI POTEST VIDERI MAGNVM IN REBVS HVMANIS, CVI AETERNITAS OMNIS, TOTIVSQVE MVNDI NOTA SIT MAGNITVDO. CICERO: