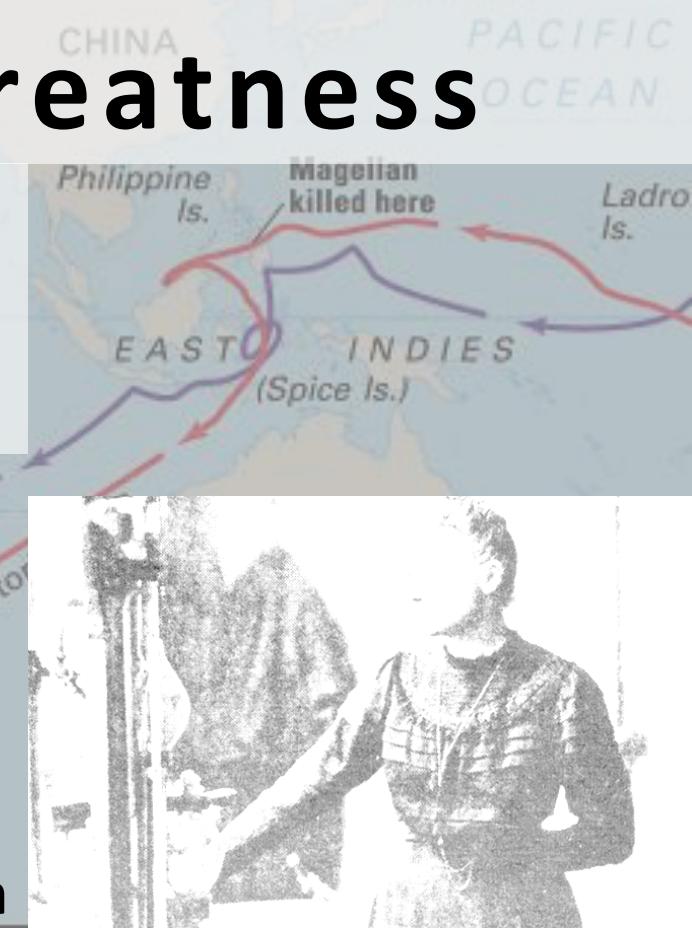
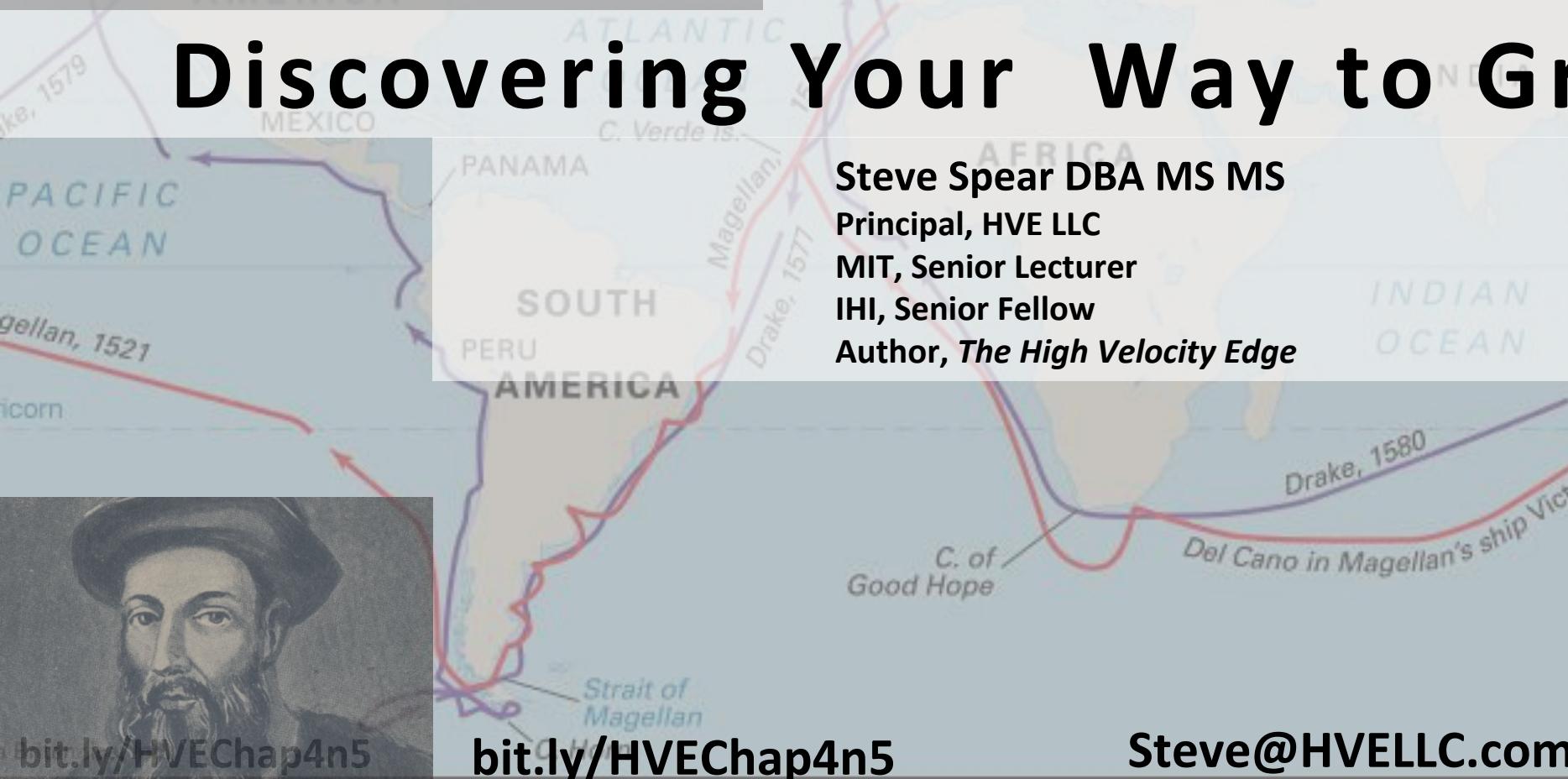




Discovering Your Way to Greatness

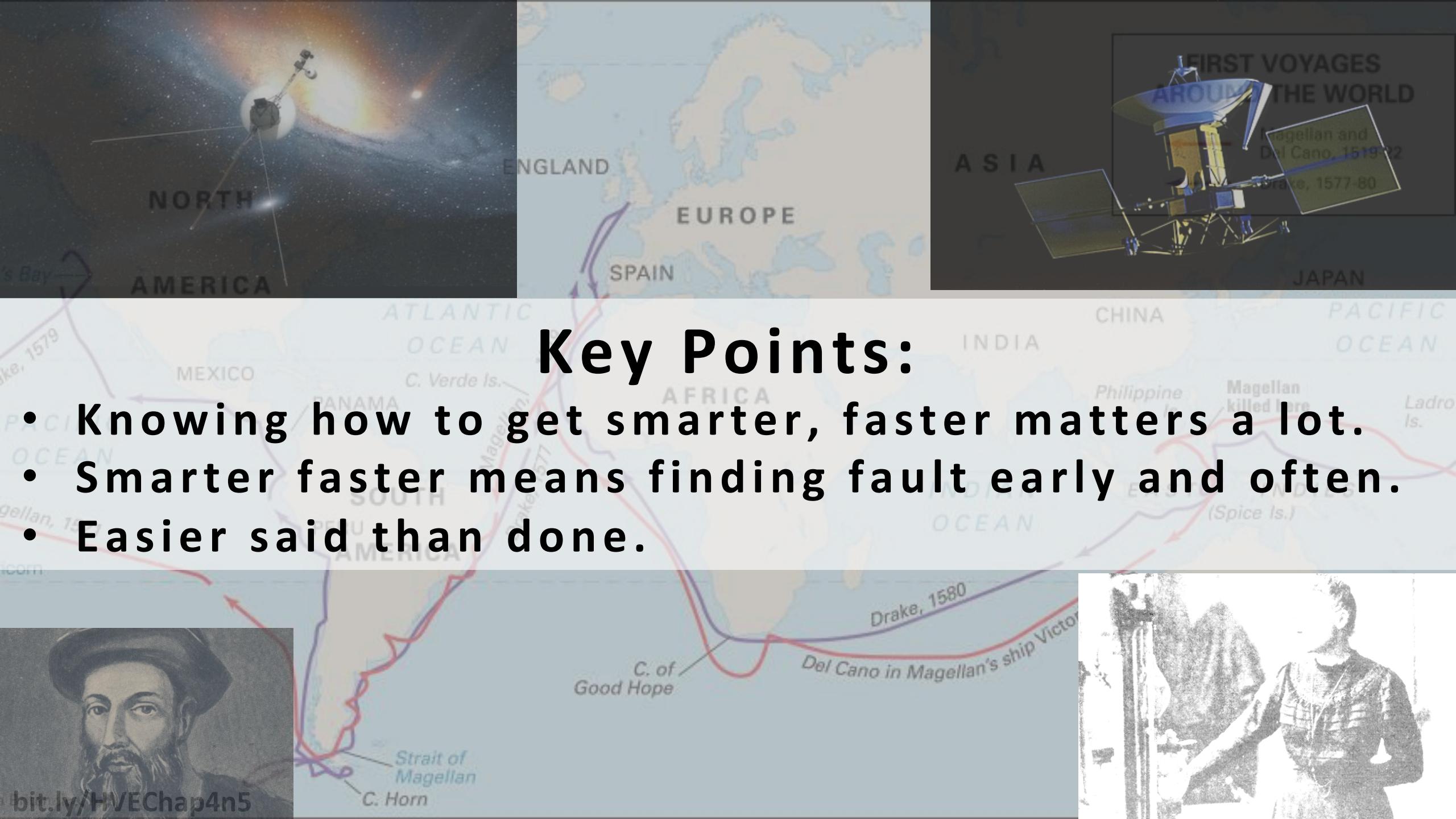
Steve Spear DBA MS MS
Principal, HVE LLC
MIT, Senior Lecturer
IHI, Senior Fellow
Author, *The High Velocity Edge*



bit.ly/HVEChap4n5

bit.ly/HVEChap4n5

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Key Points:

- Knowing how to get smarter, faster matters a lot.
- Smarter faster means finding fault early and often.
- Easier said than done.



bit.ly/HVEChap4n5

The Value of Learning at Speed

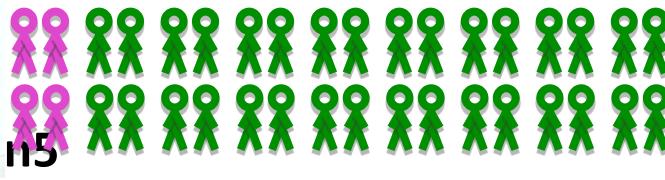




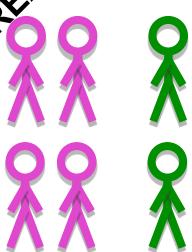
1957



1962



1968



1973



1985



1985-1995



SEE SOLVE SPREAD
] LEAD [

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Cars



Avalon

Avalon Hybrid



Camry

Camry Hybrid



Corolla

Prius



Prius C

Prius V



Venza

Yaris

SUVs and Minivans



4Runner

FJ Cruiser



Highlander

Highlander Hybrid



Land Cruiser

RAV4



Sequoia

Sienna

Trucks



Tacoma Double Cab



Tacoma Access Cab



Tundra CrewMax



Tundra Double Cab



Tundra Regular Cab

Scion



FR-S

iQ

tC

xB

xD

Sedans



GS

ES

IS

ISF

Convertible

ISC



Luxury Utility

LX



GX



RX



Hybrids

LS Hybrid



GS Hybrid



RX Hybrid



CT Hybrid



Same Problem: Different Outcome



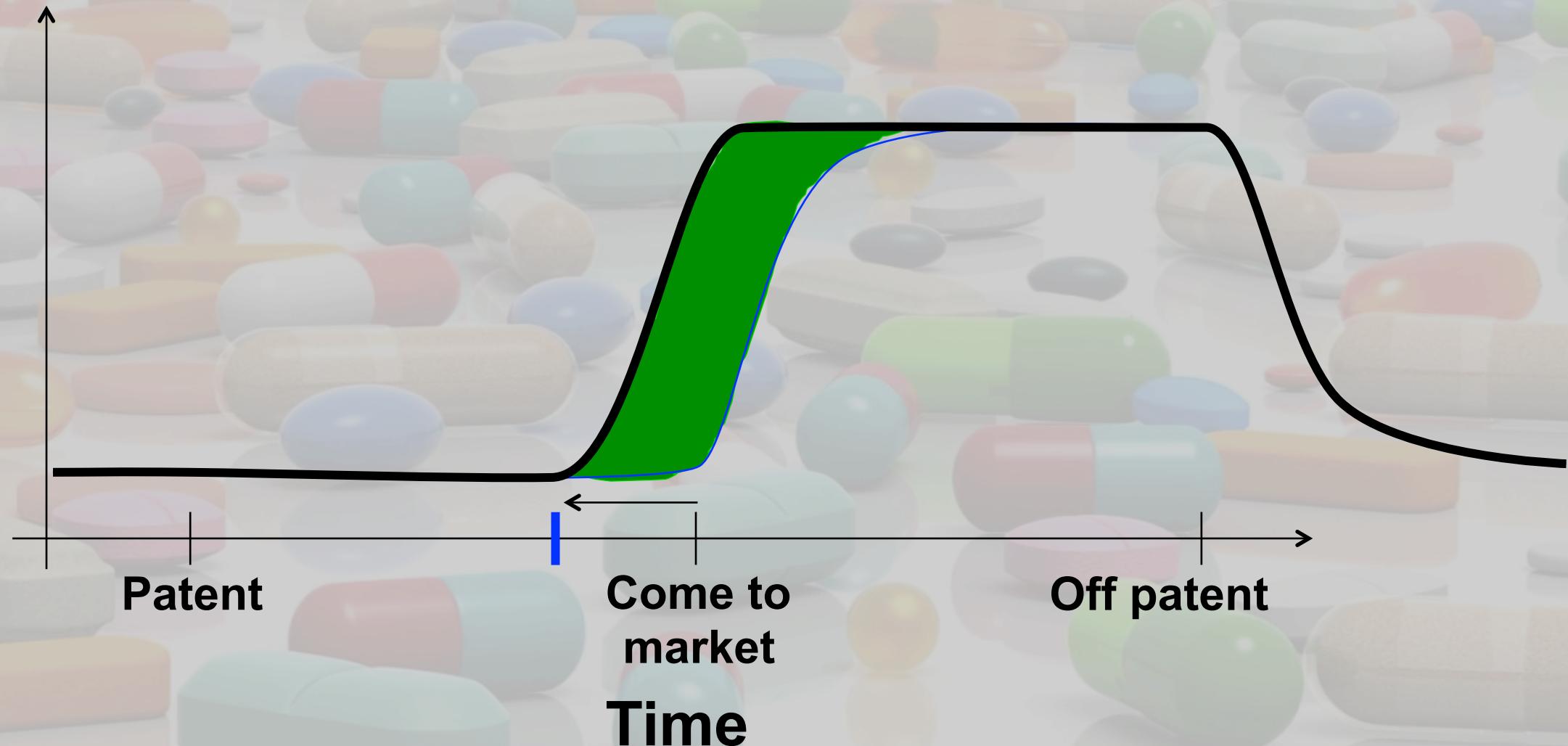
Goal: Double fuel efficiency
Means: Hybridized drive train of electric motor + internal combustion engine



Same Problem: Different Outcome



Revenue



Why speed/velocity matters so much...

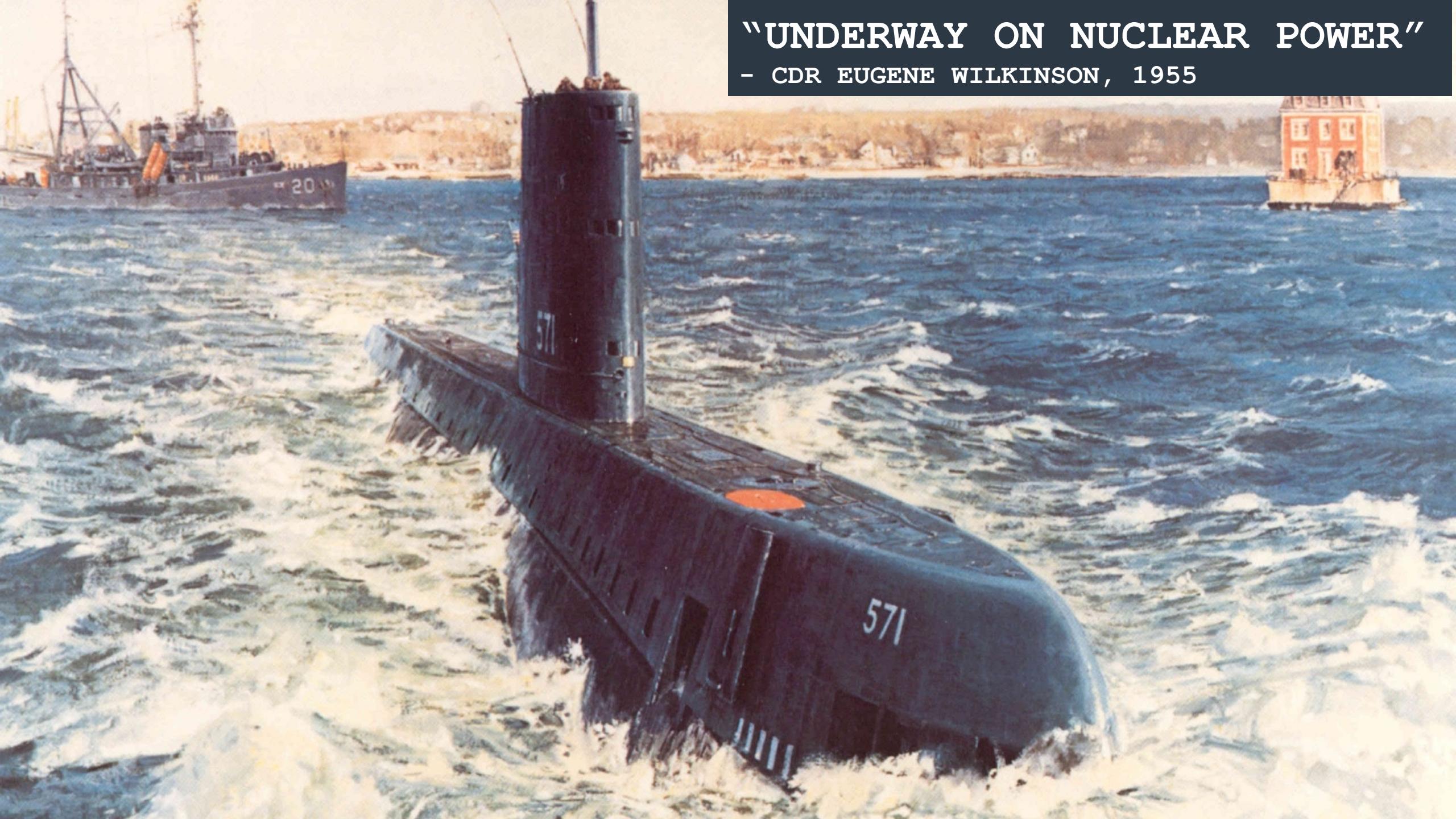
Examples:

- Toyota to market with hybrids 10 years ahead of Chevy Volt 90:1 units sold because more evolutions of improvement and application onto many more platforms.
- Apple continually out front with new features and functionality → 1/5 the market by units sold, 90+% of market profits. (eg why did person replace budget phone with expensive iPhone?)
- The crazy rewards in pharma for fast (extra millions per day in additional revenue) and first (disproportionate share of market revenue for 1st and 2nd. Crumbs left for 3rd, 4th, and 5th.

“DISCIPLINE OF ENGINEERING”

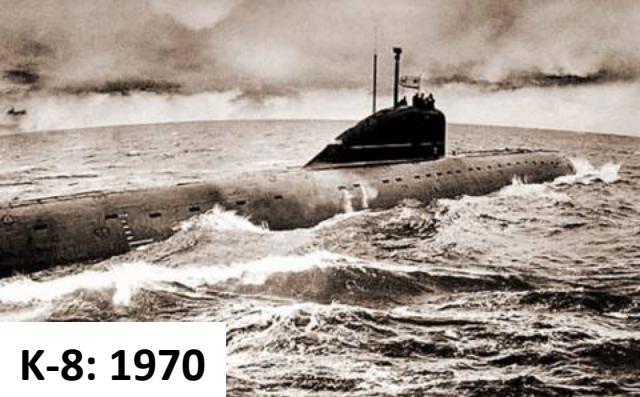
1. DESIGN ALL WORK TO *SEE PROBLEMS*
2. WHEN SEEN, *SWARM AND SOLVE PROBLEMS*
3. *SPREAD, SHARE, TEACH WHAT'S BEEN LEARNED*
4. *LEAD BY DEVELOPING SEE, SOLVE, SHARE*



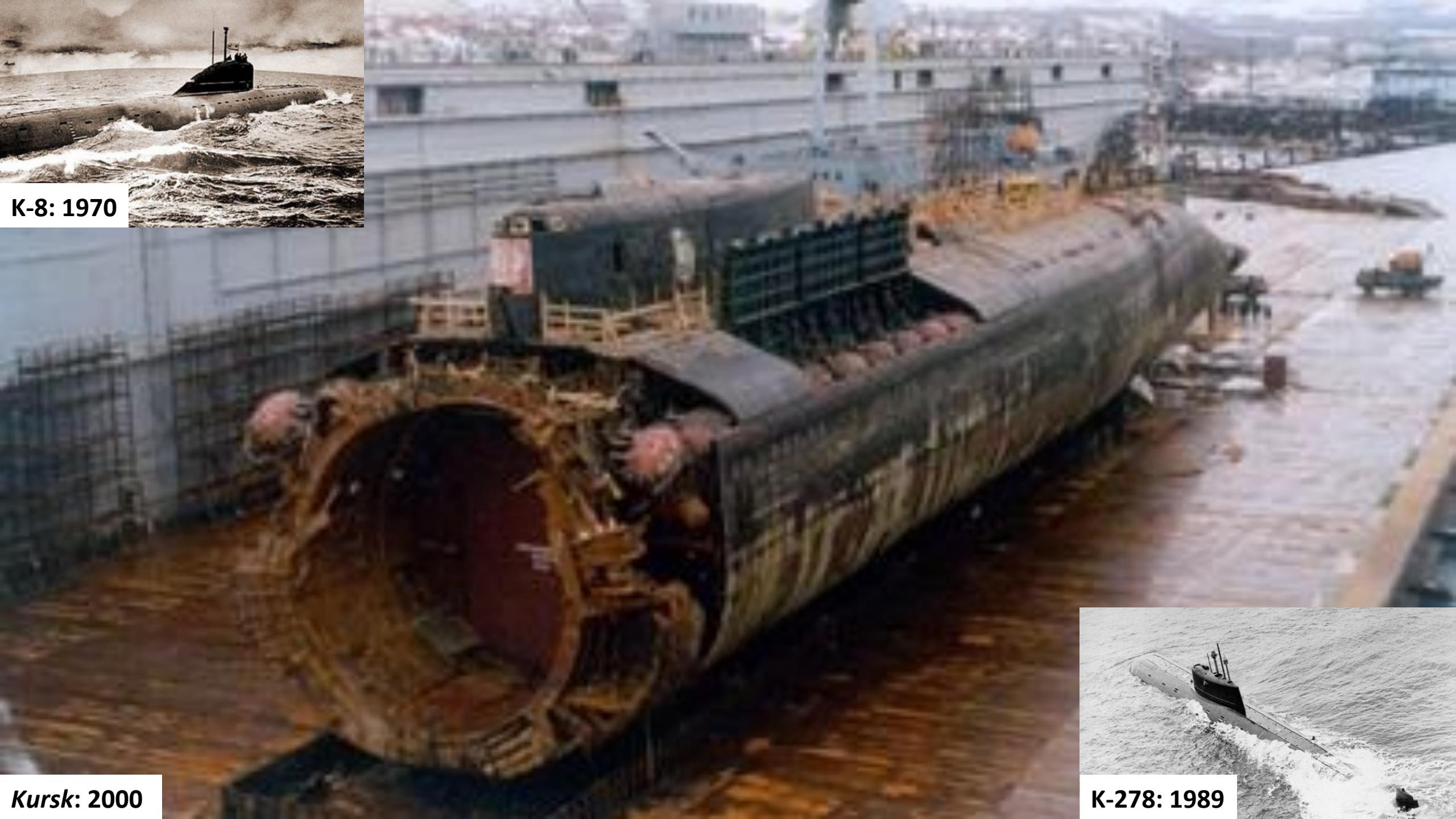


"UNDERWAY ON NUCLEAR POWER"

- CDR EUGENE WILKINSON, 1955



K-8: 1970



Kursk: 2000



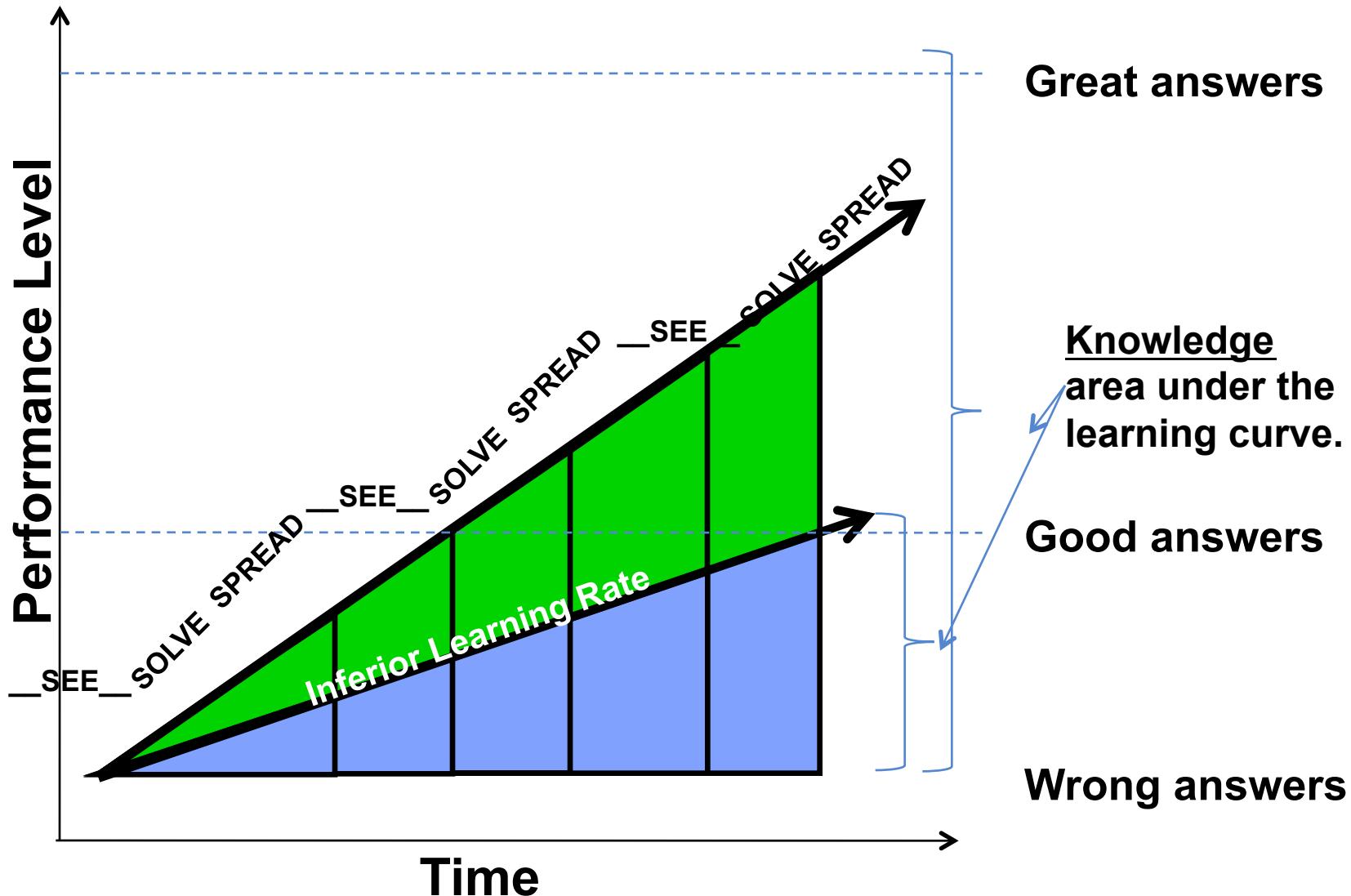
K-278: 1989

The Basic Learning Dynamic:

FINDING FAULT EARLY AND OFTEN

Competing at Learning Speed:

Finding and fixing flaws in thinking



FINDING FAULT IN OPERATIONS



Should have acted here





Last chance



Should have acted here



Looks like a jerk but...
right decision but
bad data





FINDING FAULT EARLY IN PLANNING

JONATHAN PARSHALL and ANTHONY TULLY

Foreword by John B. Lundstrom

SHATTERED SWORD

The Untold Story of the
Battle of Midway

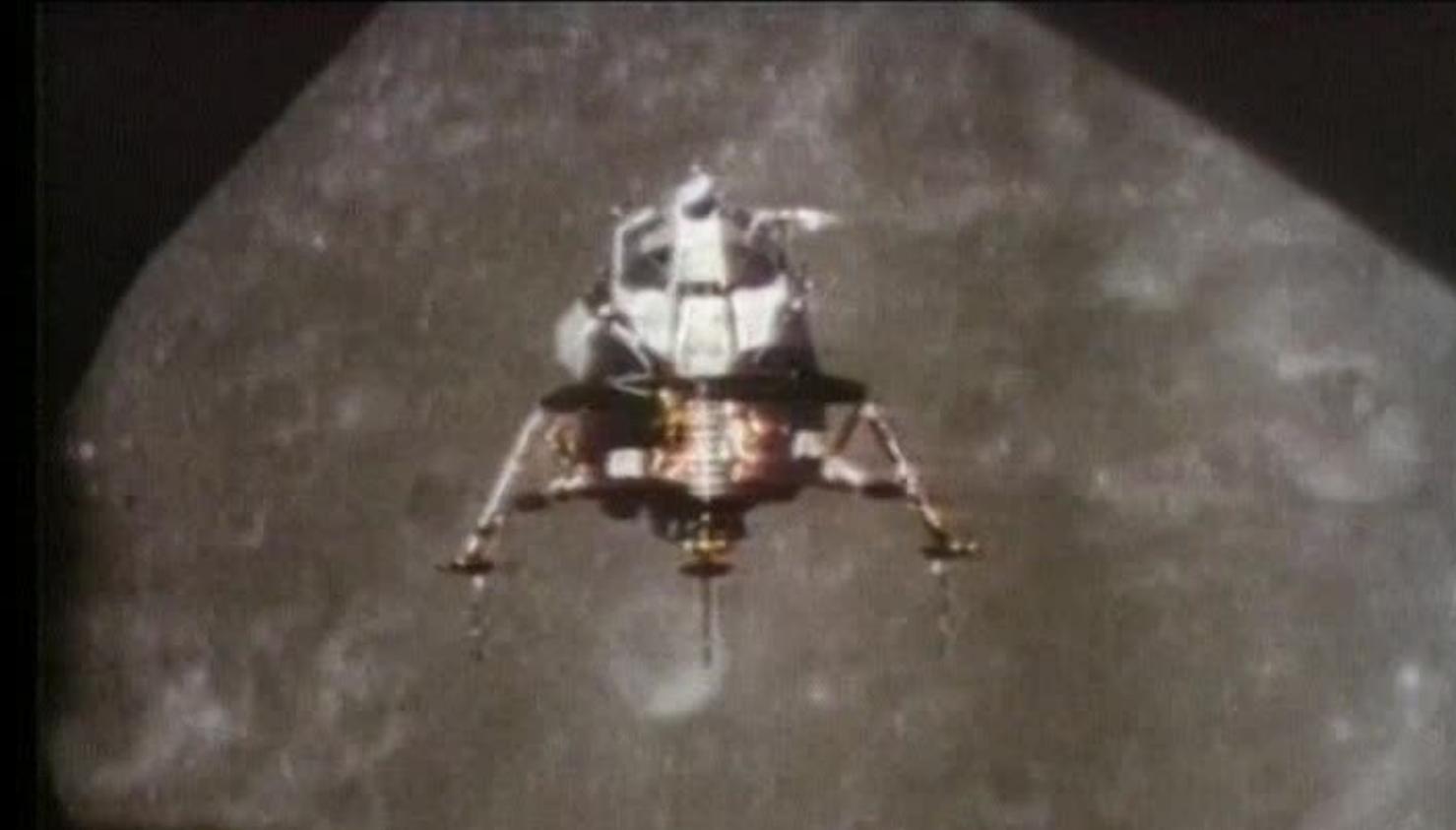
"Shattered Sword... will be the
standard work on the Battle of
Midway for years to come."
—Air Power History



FINDING FAULT IN PREPARATION



AF 447



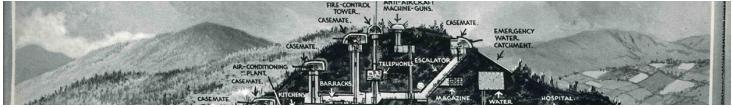
bit.ly/HVEChap4n5

Knowing how to get better faster matters a lot...

Steve@HVELLC.com Oct 10 18

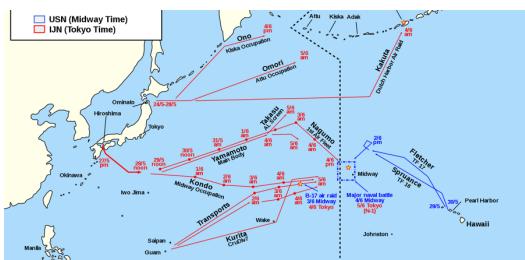
...finding fault in thinking before doing is key...

Scale



When presenting a plan, do I:

- invite critique, or
- advocate as to why it's right and insist on subordinates doing it right?



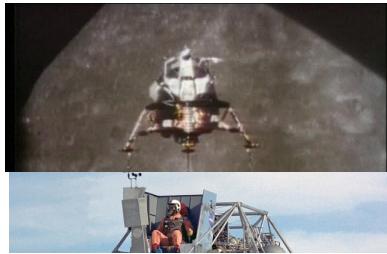
When presented with a plan, do I:

- identify what I don't understand and ask questions, or
- only work real hard to master the logic and nuances, ignoring my confusion?

Planning:

Advocate for our best idea or solicit critique to find flaws?

Rehearse here to avoid improvisation there.



When preparing, do I:

- rehearse and build muscle memory on the low chance high risk events too or
- prepare only for the expected 'normal'?



Recovery or not from system failure

Practice:

Prepare only for normal or abnormal too?

When I supervise others do I:

- encourage them to call out their challenges, or
- urge more caution, carefulness, diligence, etc.?



When I have difficulty do I:

- (ask for help and) correct my approach or
- just keep at it?

Operation:

work around culture vs. See and solve

Steve@HVELLC.com

Phase



**A: What are you doing?
Why?
How?**

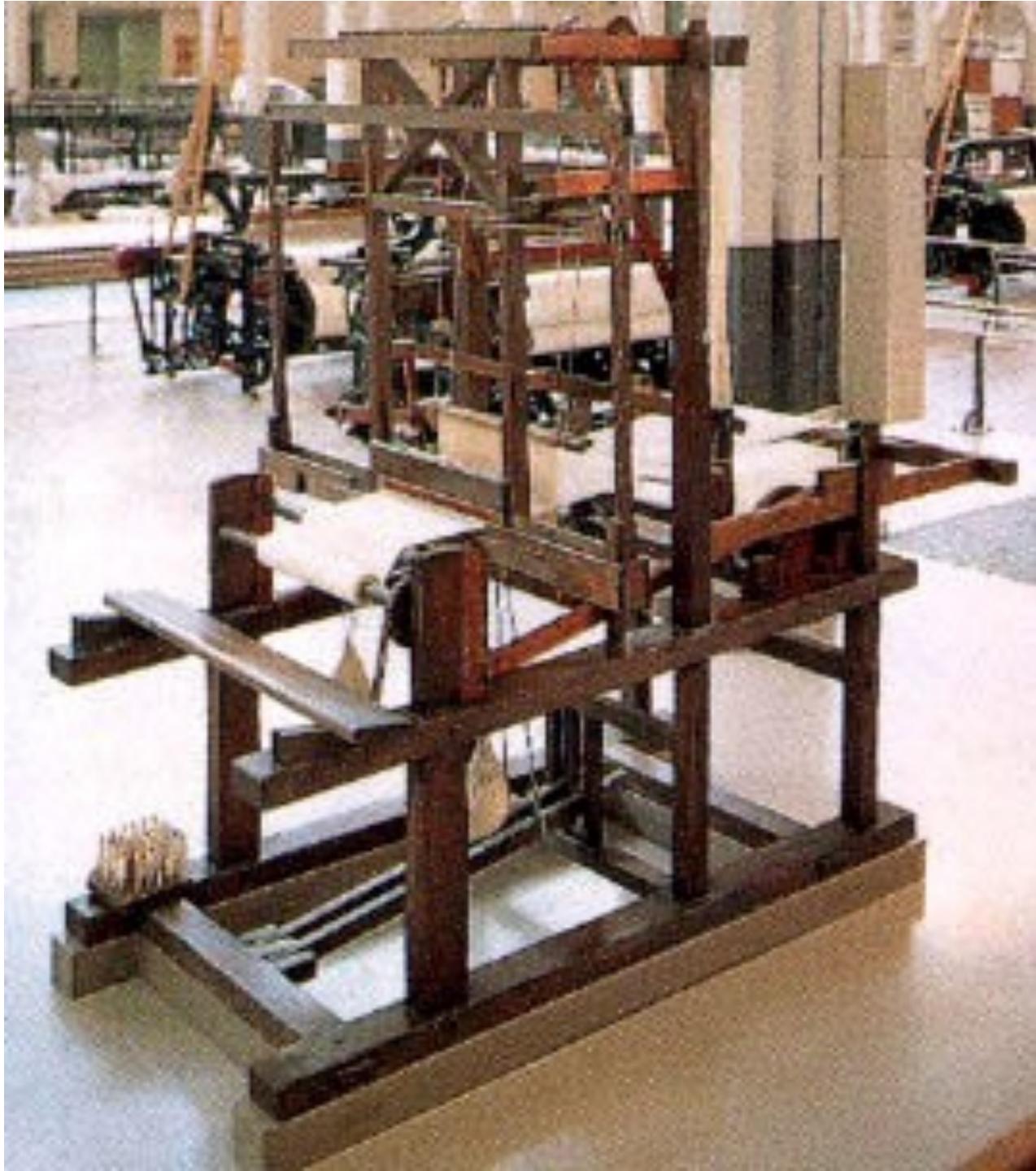
B: What's not working?

C: Why not?

D: What should change?

E: Who have we taught?

Sakichi TOYODA





NEW STUFF

MAKING SEEING TO SOVLE EASIER

Ideal state: See and solve little problems before they become big problems

see what's going wrong when it's going wrong
so you can solve the problem,
before it gets out of control.



Better to know you have a sweating pipe, before it comes a leaking pipe that might burst and cause a flood.

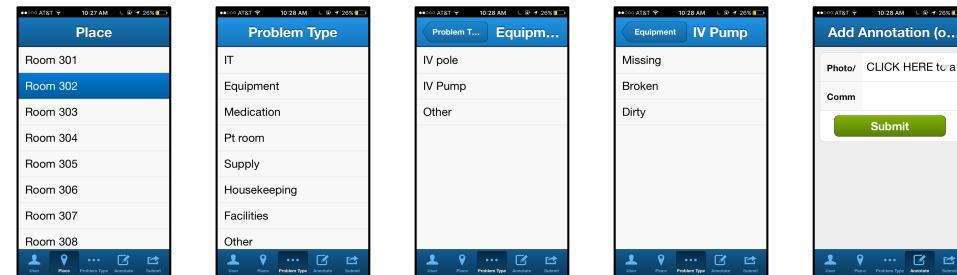
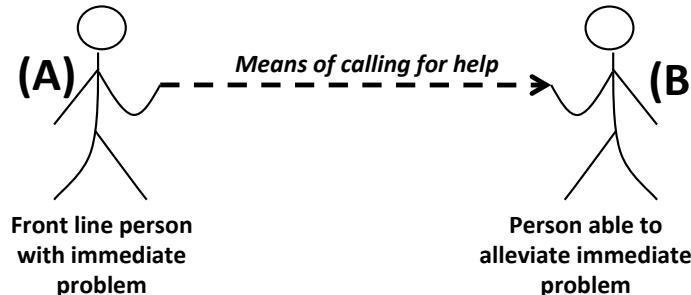
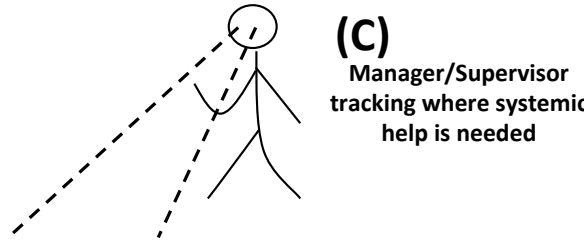
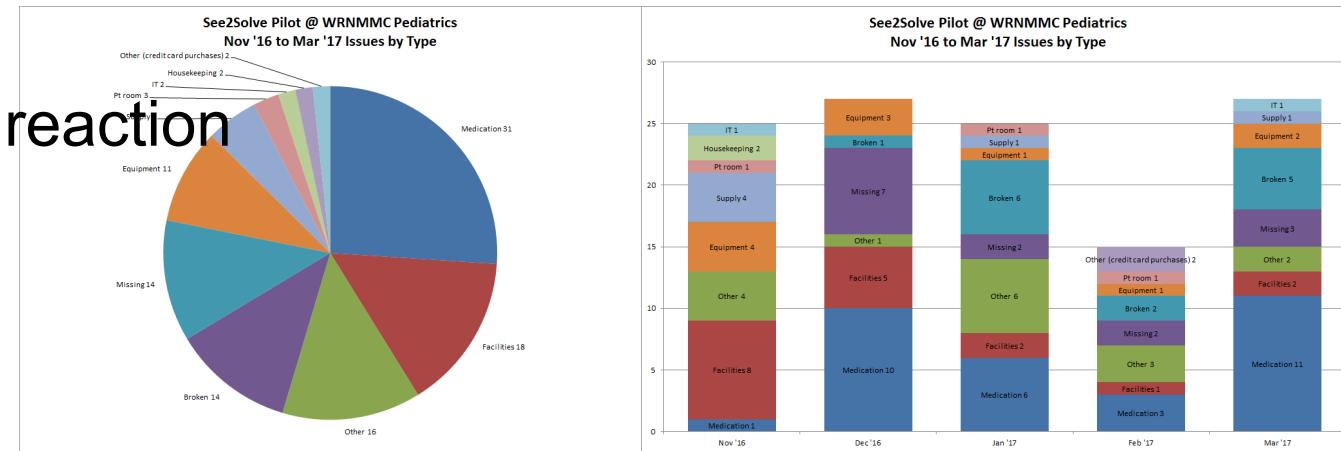
Current state: Why there's a workaround dynamic



Virtual Andon Cord

The key to success is early detection and reaction

Connecting (A) the person with a problem to
(B) the person who can solve it, all visible to
(C) the person responsible

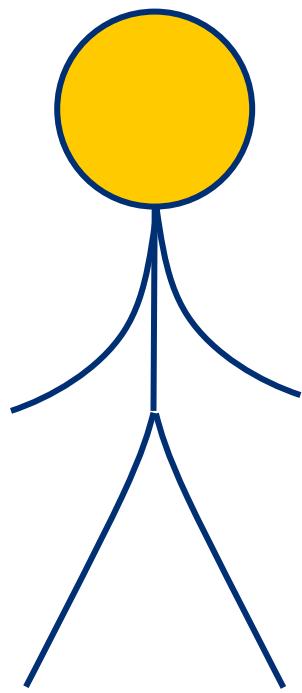


(A) Quick and easy front end
(10-15 seconds to make “help!” call).

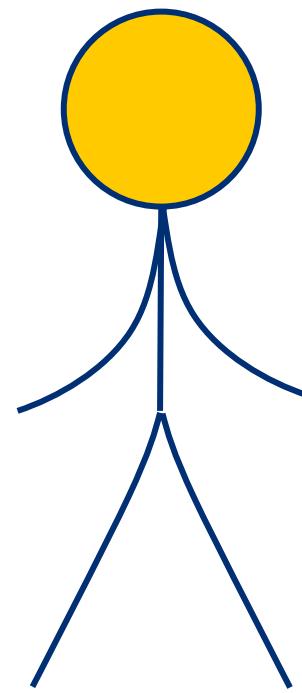
(C) Dashboards give system leaders real time awareness of what's going wrong and how it's being handled.



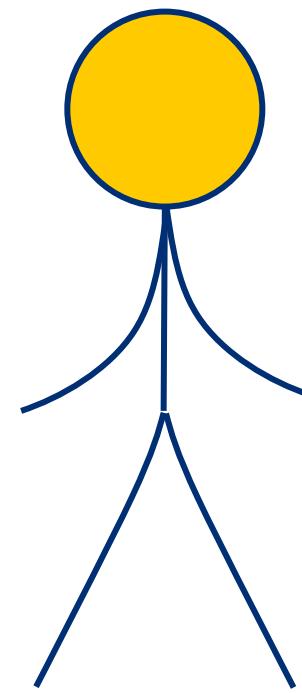
(B) Ticket with key info +
photo go to first tier support



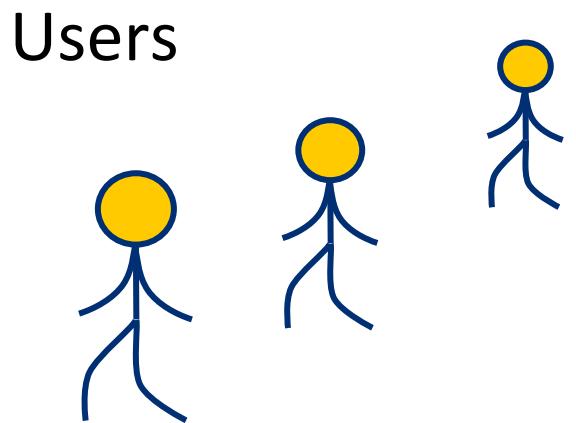
Conceptualization &
lead generation



Customer support



Technical



The 4th Guy/Gal:
Biz Dev/Sales

