ELEVATE
AGILE 20 19

WHAT EVERY AGILE ORGANIZATION HAS IN COMMON

Challenges & Solutions
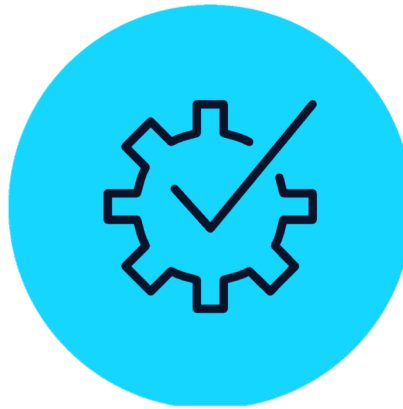
LEN GRESKI

THREE COMMON CHALLENGES
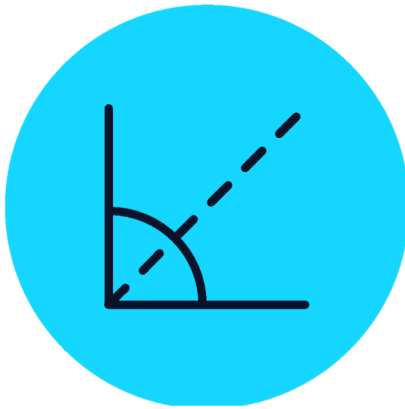
PREDICTABILITY

PRODUCTIVITY

BUSINESS VALUE

THE PREDICTABILITY CHALLENGE

PREDICTABILITY STARTS WITH INDIVIDUALS

- *Everyone who is skilled at software development was unskilled at some point.*

- *Each of us has a predictability story.*

- *Individual predictability requires ongoing investment in skill development.*

What Every Agile Organization Has in Common

ELEVATE AGILE 2019

TEAMS ARE MORE THAN THE SUM OF INDIVIDUALS

- *A set of predictable individuals isn't automatically predictable as a team.*

- *Number of relationships on a team is a binomial expansion.*

- *Agile approaches account for the "number of relationships" challenge.*

ELEVATE AGILE

MAKE THE WORK VISIBLE

What Every Agile Organization Has in Common

What Every Agile Organization Has in Common

ESTABLISH DEDICATED TEAMS

A set of predictable individuals isn't automatically predictable as a team.

To achieve predictability, a team needs autonomy, mastery, and purpose.

Agile approaches help teams establish the intrinsic motivation necessary to keep knowledge workers engaged.
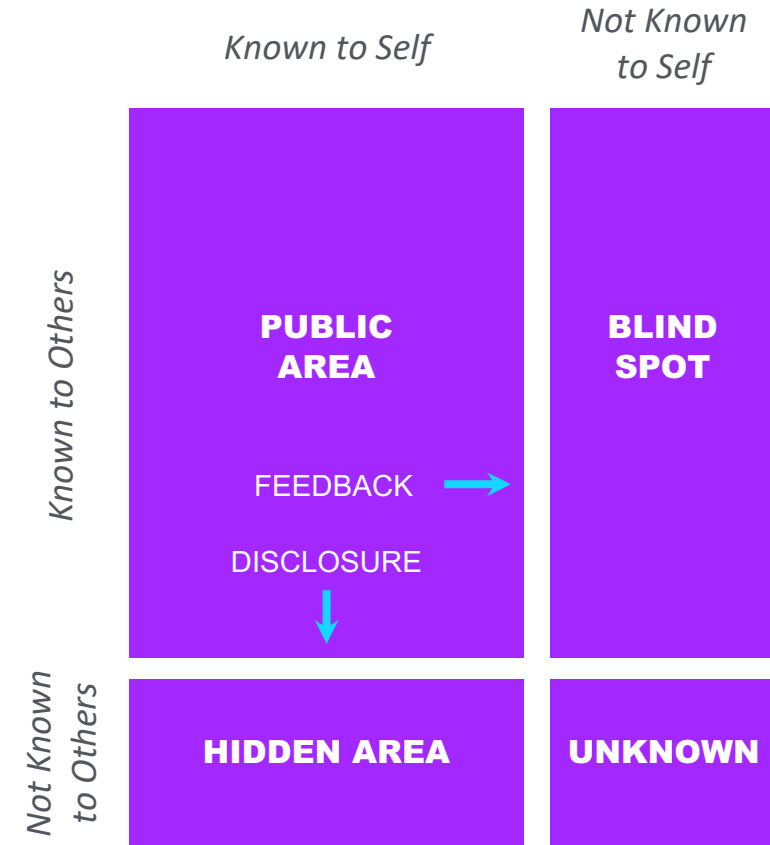
PREDICTABILITY BEGINS WITH ME...

A predictable leader is a more effective leader.

We reduce our blind spot by soliciting feedback.

We reduce our hidden area through disclosure.

What Every Agile Organization Has in Common

Known to Self   *Not Known to Self*

Known to Others

PUBLIC AREA

BLIND SPOT

FEEDBACK →

DISCLOSURE ↓

Not Known to Others

HIDDEN AREA

UNKNOWN

JOHARI WINDOW

PREDICTABILITY IMPROVES RESULTS

Open Distribution Platform Program Performance

Functionality	PI 3	PI 4	PI 5	PI 6	PI 7
Velocity	316	421	623	467	598
% Business Value Achieved	86%	116%	118%	109%	100%
% of Features Accepted	75%	67%	90%	87%	94%
% of Story Points Accepted	97%	80%	63%	84%	94%
Planned Features	31	36	46	49	53
Accepted Features	22	22	41	44	50
Planned Enabler Features	-	3	2	5	-
Accepted Enabler Features	-	4	2	3	-

Velocity increasing since first increment

Teams using stretch objectives to manage business value achieved

Quality	PI 3	PI 4	PI 5	PI 6	PI 7
Defects Opened	13	21	23	37	69
Defects Closed	13	17	20	37	69

Improved tracking increased visibility to defects escaping from development to testing

THE PRODUCTIVITY CHALLENGE

PRODUCTIVITY REQUIRES MEASUREMENT

"Far better an approximate answer to the right question, which is often vague, than a precise answer to the wrong question."

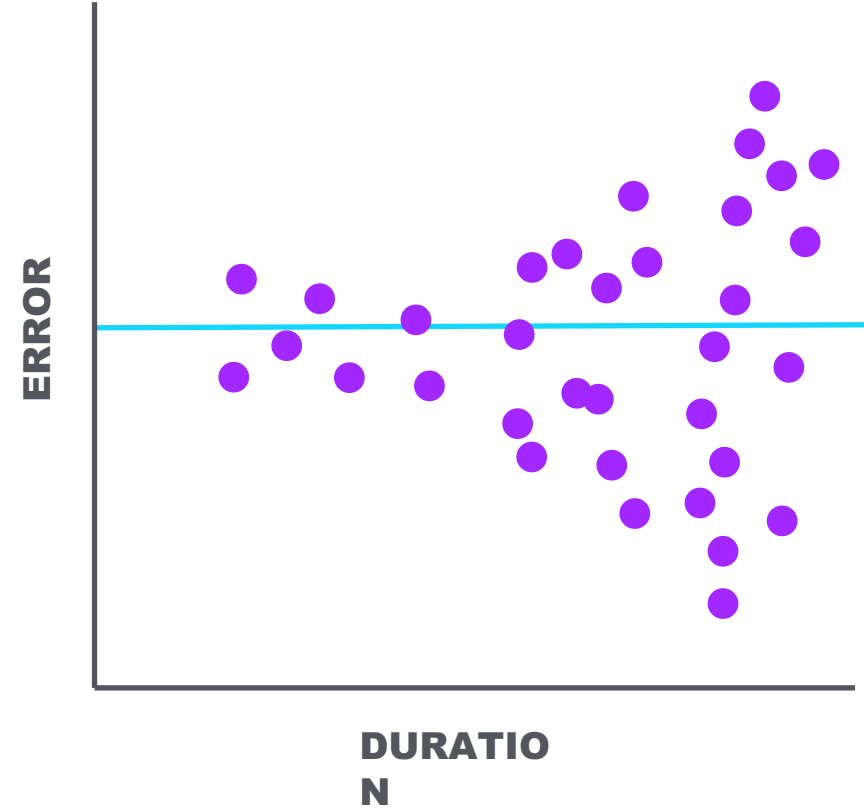John Tukey , *Annals of Mathematical Statistics*, Volume 33 (1962)

ELEVATE AGILE

PREDICTING EFFORT / DURATION IS HARD

The bigger something is, the harder it is to predict.

A 30% error in a two-week deliverable is three days, but a 30% error in a six-month deliverable is almost 40 days.

Estimating errors are non-linear.

REDUCE BATCH SIZE

Smaller batch sizes help us mitigate the variability problem in software development.

Additional benefits: feedback acceleration, risk reduction.

Key challenge: overcoming increased transaction costs.

RESULTS: FEATURE LEAD TIME REDUCED BY 88%

COST

Optimum batch size

Total cost

Holding cost

Transaction cost

ITEMS PER BATCH
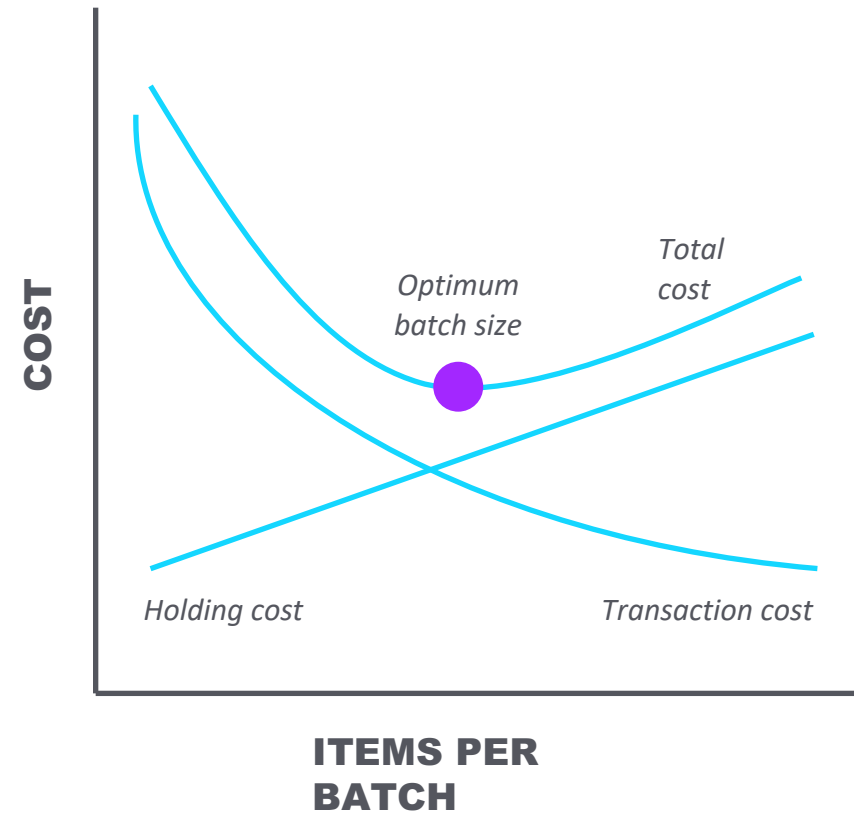
IMPROVE ENGINEERING DISCIPLINE

	Not Present				Present with Outstanding Results		Comments
	0	1	2	3	4	5	
1 Coding standards (focused on code clarity)					x		Standards based on making it easy for others to understand the code
2 Design and code reviews				x			Design and code reviews consistently conducted
3 Configuration / version management				x			Ability to manage / track multiple versions & releases
4 One-click build (public and private)			x				Ability to build from source and deploy to a target environment in one click
5 Continuous integration			x				Ability to automatically build / test / deploy changes to indvidual files
6 Automated unit testing			x				Ability to run unit tests during build process using automated testing tools
7 Automated acceptance testing		x					Ability to run acceptance tests during build process using automated testing tools
8 Stopping if the tests don't pass		x					Code not promoted with known failures
9 System testing with each iteration	x						Includes tests with upstream and downstream processes
10 Stress testing (application- and system-level)	x						Includes overall volume and peak load testing
11 Automated release / install packaging		x					Ability to automatically install built modules on multiple target environments
12 Escaped defect analysis and feedback		x					Regularly assessing why defects are found in production, using data to improve practices
Subtotal	0	4	6	6	4	0	

Total Score   20

Adapted from *Leading Lean Software Development: Results are Not the Point*, Mary & Tom Poppendieck

PRODUCTIVITY STARTS WITH ME...

"If you cannot manage yourself, you have no business managing others."

- Gerald Weinberg, Ph.D.
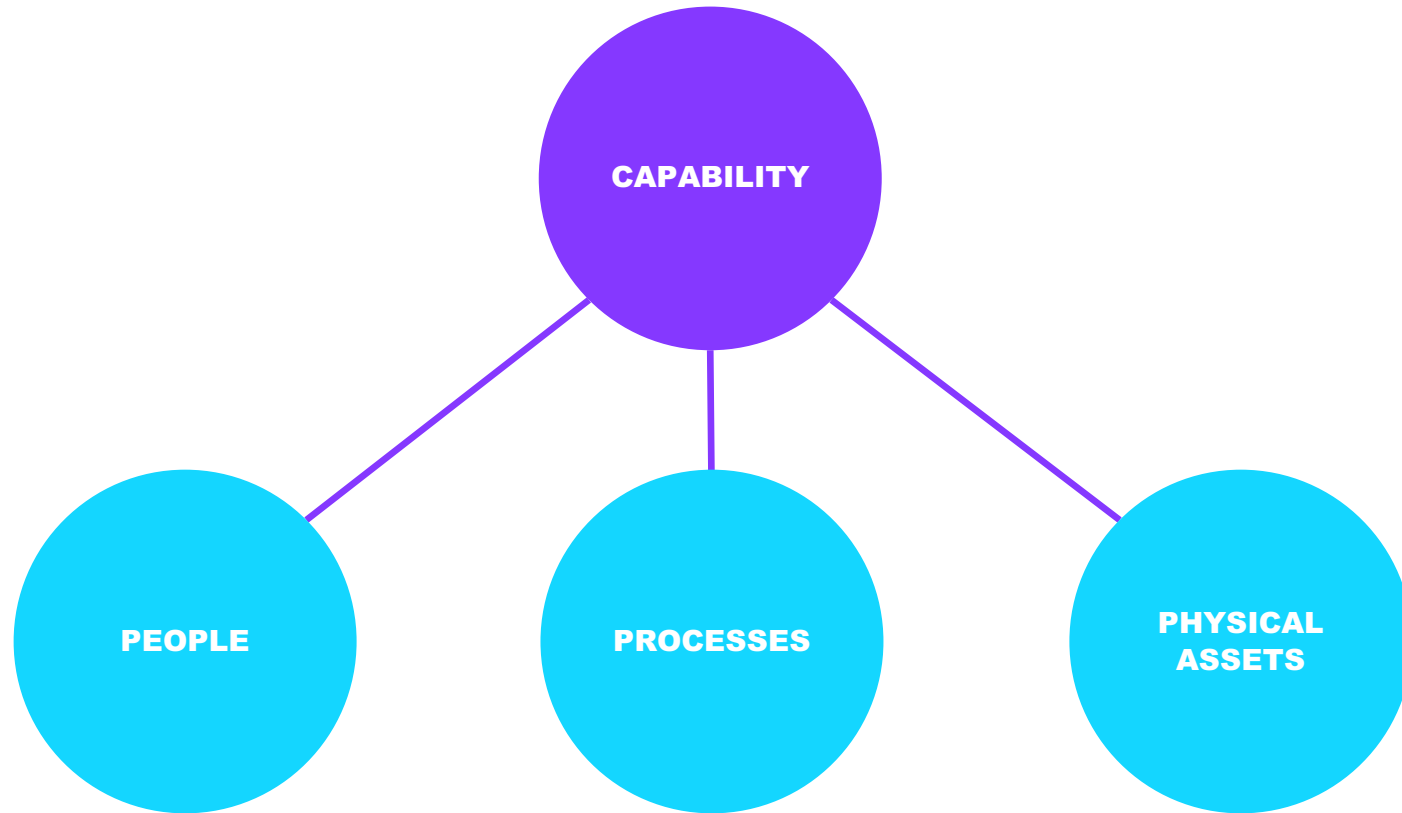
THE BUSINESS
VALUE CHALLENGE

THE BUSINESS VALUE CHALLENGE

AGILITY UNLOCKS VALUE

IF WE CAN CALCULATE LIFECYCLE COST, WE CAN ESTABLISH REQUIRED PROFIT

- *Emphasis on working, tested software*
- *Reducing lead time*
- *Economically measurable acceptance criteria*
- *Team based funding*

COMMIT TO VALUE ENGINEERING

In the end, leaders do two things. They

initiate conflict and resolve conflict.

- George Barna, Ph.D.

CLOSING THOUGHTS