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Overload, change, and sustainability

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OR





WHY YOU'RE SOMETIMES TEMPTED TO THINK
THE PEOPLE WHO WORK FOR YOU ARE LAZY

&

WHY THEY DON'T THINK SO MUCH OF YOU,
EITHER



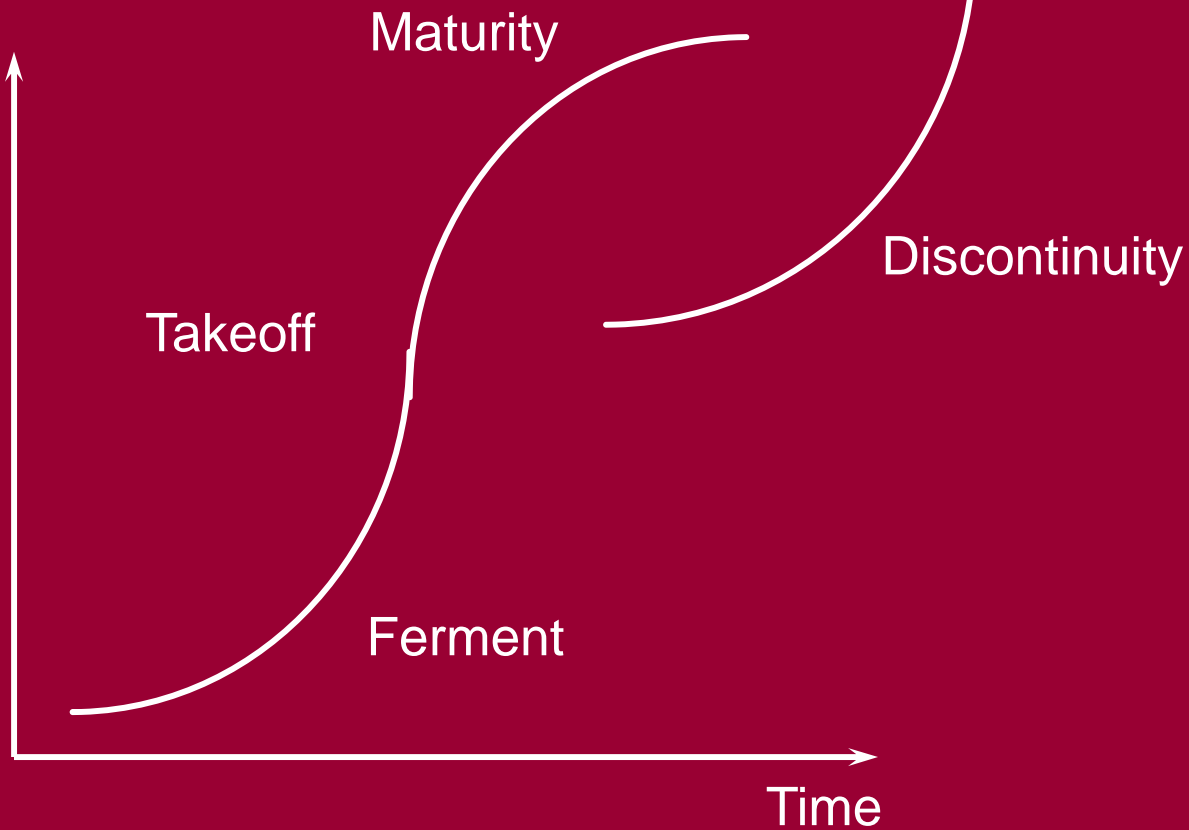
Outline

- Sustainability: Just another transition?
- Why we get stuck:
 - An introduction to the dynamics of overload & the dangers of firefighting
- Why we stay stuck:
 - The obvious solutions often make things worse
- What can be done



The Schumpeterian Puzzle

Performance



Incumbent Replacement: Some Empirical Results

- Many industry level studies suggest that incumbent firms are often replaced by entrants at moments of “discontinuous” innovation:
 - Photolithographic alignment, Ice making, Radial Tires, Scrap steel, Color television, Vacuum tubes, Hard disks, Mini computers, Personal computers....
- This is not always the case:
 - Typesetting equipment, Calculating machines, Pharmaceuticals, Specialty glass, Branded consumer goods...
- But even when incumbents do retain industry leadership they often:
 - Buy entrants (or their technology)
 - Or spend an enormous amount on internal development



Incumbent failure in semiconductor photolithography...

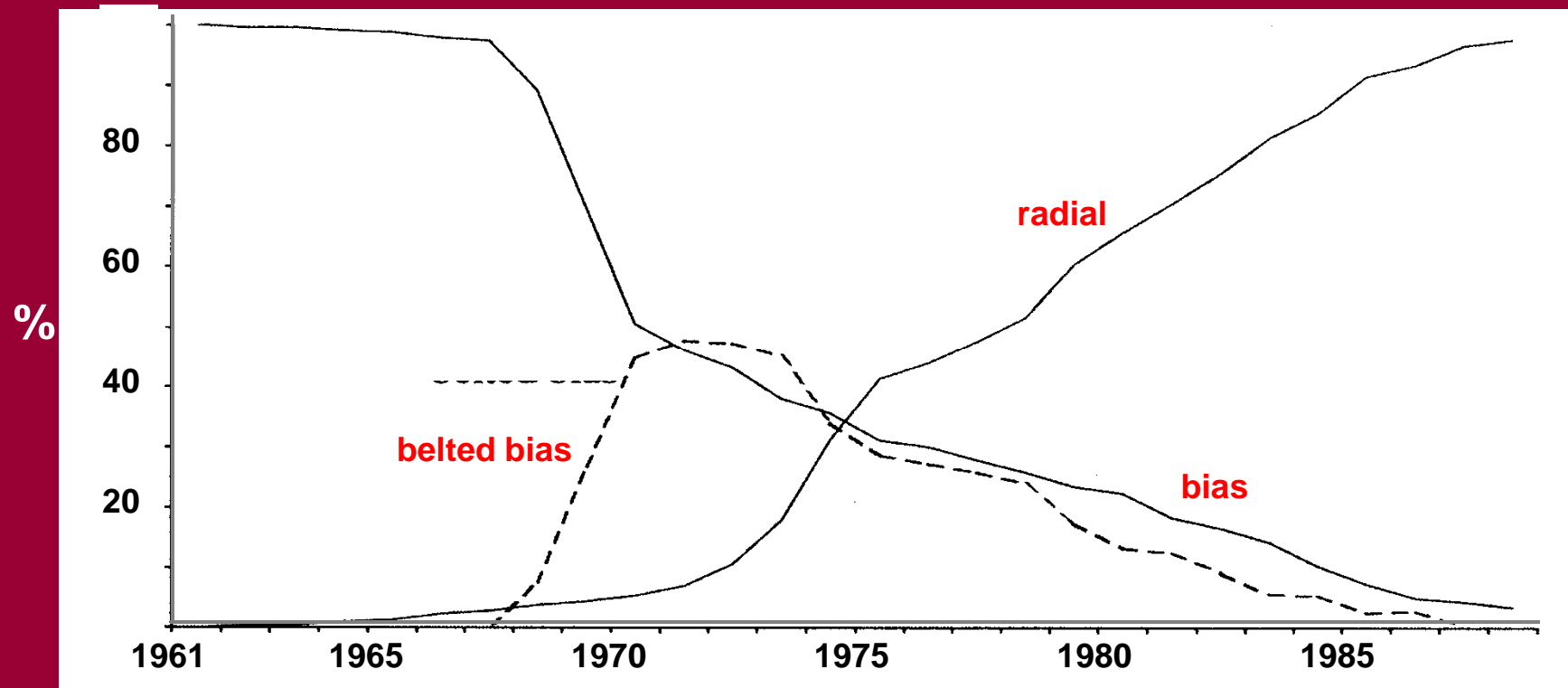
Cumulate share of sales of photolithographic alignment equipment, 1962-1986, by generation

	Contact	Proximity	Scanner	S&R (1)	S&R (2)
Cobilt	44		<1		
Kasper	17	8		7	
Canon		67	21	9	
P-Elmer			78	10	<1
GCA				55	12
Nikon					70
Total	61	75	99+	81	82+

Henderson & Clark, 1990



Tires Shipped By Construction Type: 1961-1989



Sources: Rubber Manufacturers Association, "Tire Shipments by Construction," *Tire Industry Facts* (Akron, Ohio, 1990); Firestone Tire & Rubber Company, "Sales Forecasts," *Corporate Archives* (Akron, Ohio, 1980).

Citation: Sull, Donald. "The Dynamics of Standing Still: Firestone Tire & Rubber and the Radial Revolution," *Business History Review*, 1999, pp. 430-464.



Existing Explanations

- Stupidity
 - If I ran GM...
- Market Structure
 - Fear of cannibalization
- Innovator's Dilemma problems
 - We won't make nearly as much money
- Blindness/Cognitive limitations
 - Digital photography will be like conventional photography.. Only digital
- Old Patterns of Behavior
 - That's not the way we do things around here



WE THINK FIRMS ALSO GET “STUCK”



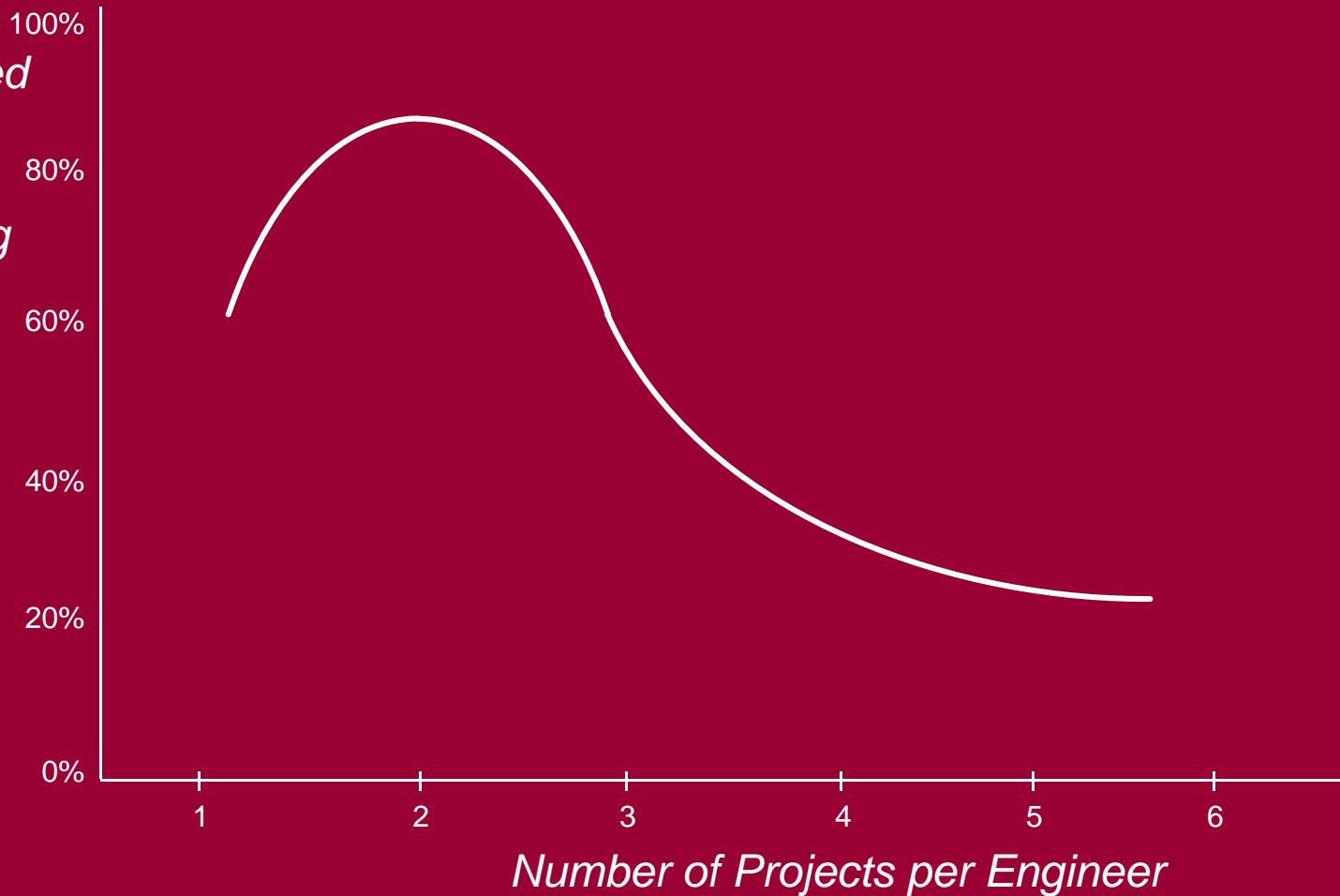
Overload at PreQuip

Active Projects (formal development projects by number)	Resources Required for Completion (months)	Months to Completion (desired)	Implied Development Resource Allocation (months)		
			This year	Next year	Year after that
1	54	8	40	14	0
2	123	24	38	62	23
3	86	12	50	36	0
4	286	20	92	172	22
5	24	4	24	0	0
.					
.					
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26	352	36	48	150	120
27	75	9	62	13	0
28	215	30	40	80	95
29	153	18	60	93	0
30	29	3	29	0	0
All Other Support Activity (customer support, troubleshooting)	—	—	430	430	430
Total Development Requirements	—	—	2783	2956	2178
Available Resources (months)	—	—	960	960	960
Utilization (percent)	—	—	289.9	307.9	226.9

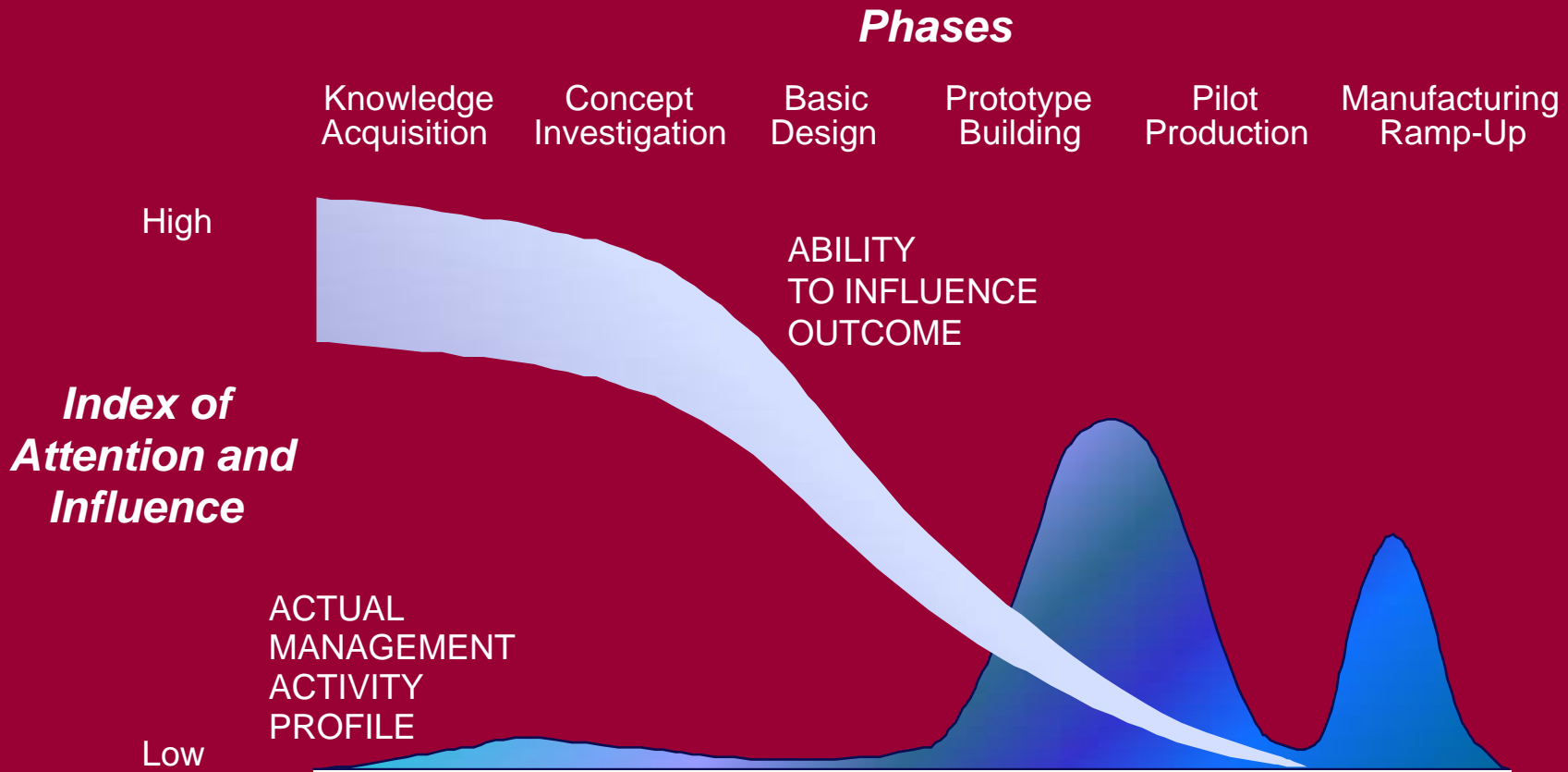


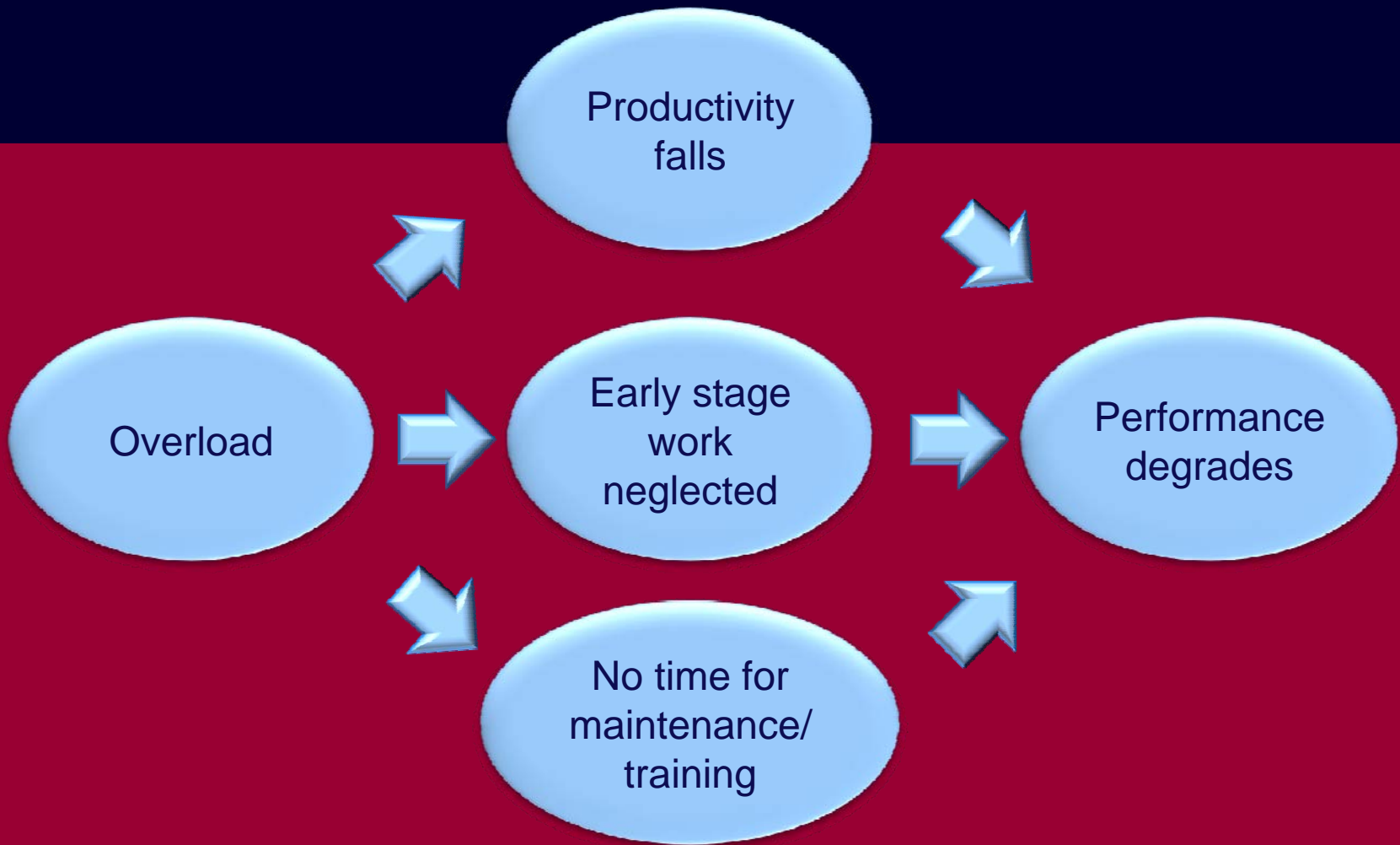
Overcommitment destroys productivity

*Average
Value-Added
Time on
Engineering
Tasks*



And shifts attention away from early stage work







So why don't we fix it?





Part 1

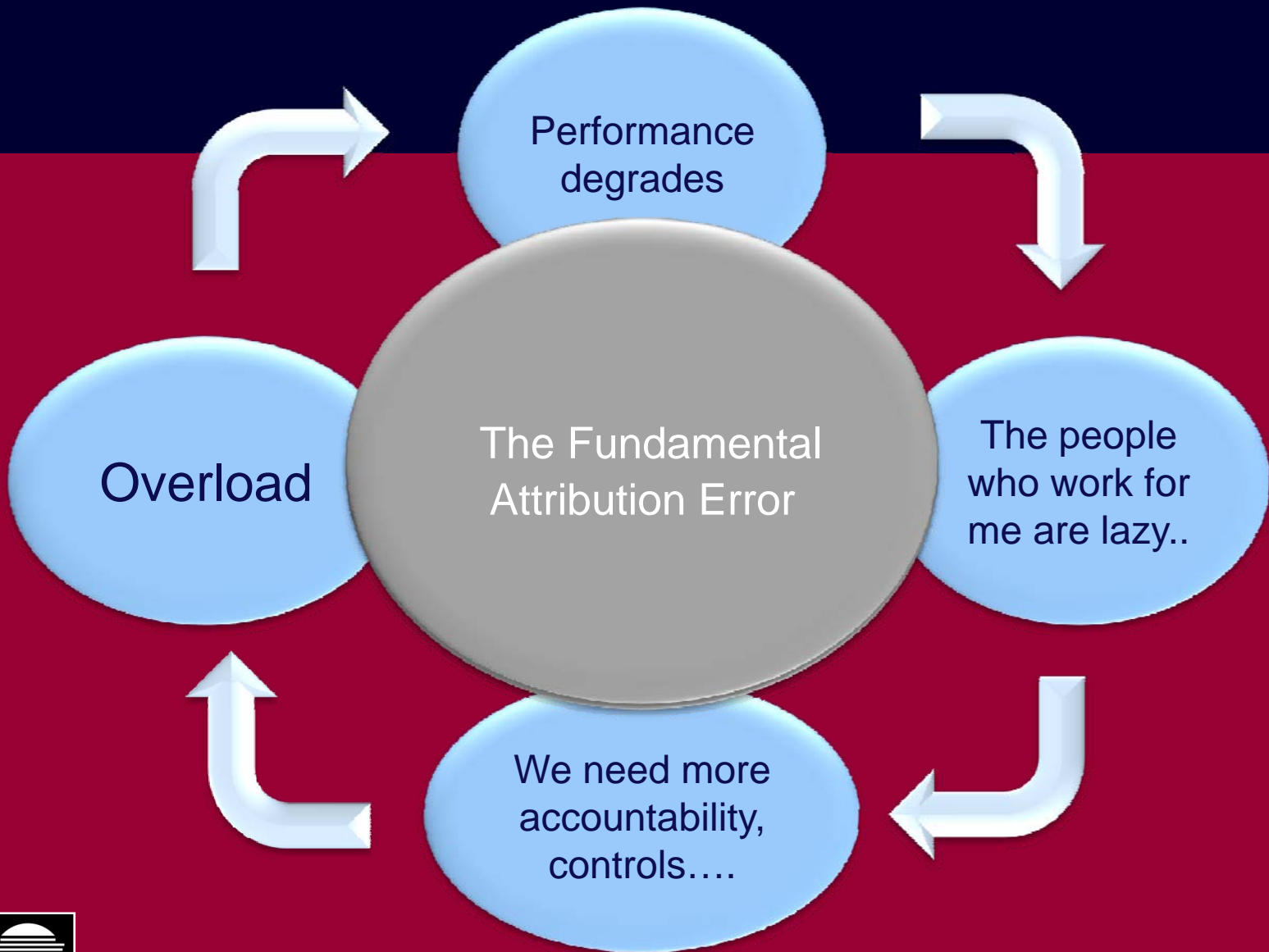
The usual “solutions” nearly always make things worse



Common responses to overload

- Blame the people who work for you
 - After all, last time you pushed them a little they came through for you...
 - So the problem must be with them – let's put in more controls, tighten up our processes...





Common responses to overload

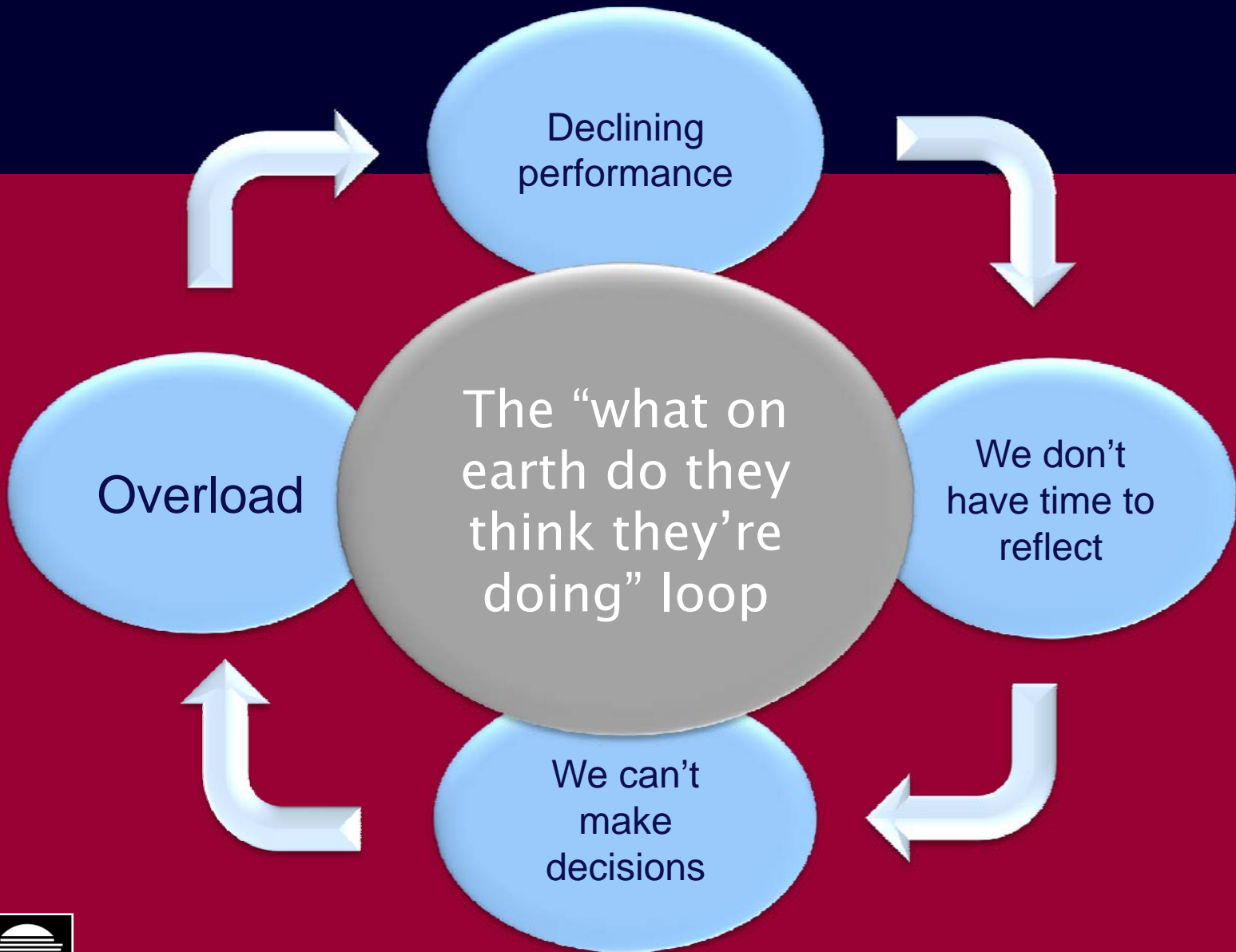
- Blaming the people who work for you
 - After all, last time you pushed them at little they came through for you...
 - So the problem must be with them – let's put in more controls, tighten up our processes...
- Working really, really hard – so hard that there isn't time to make decisions

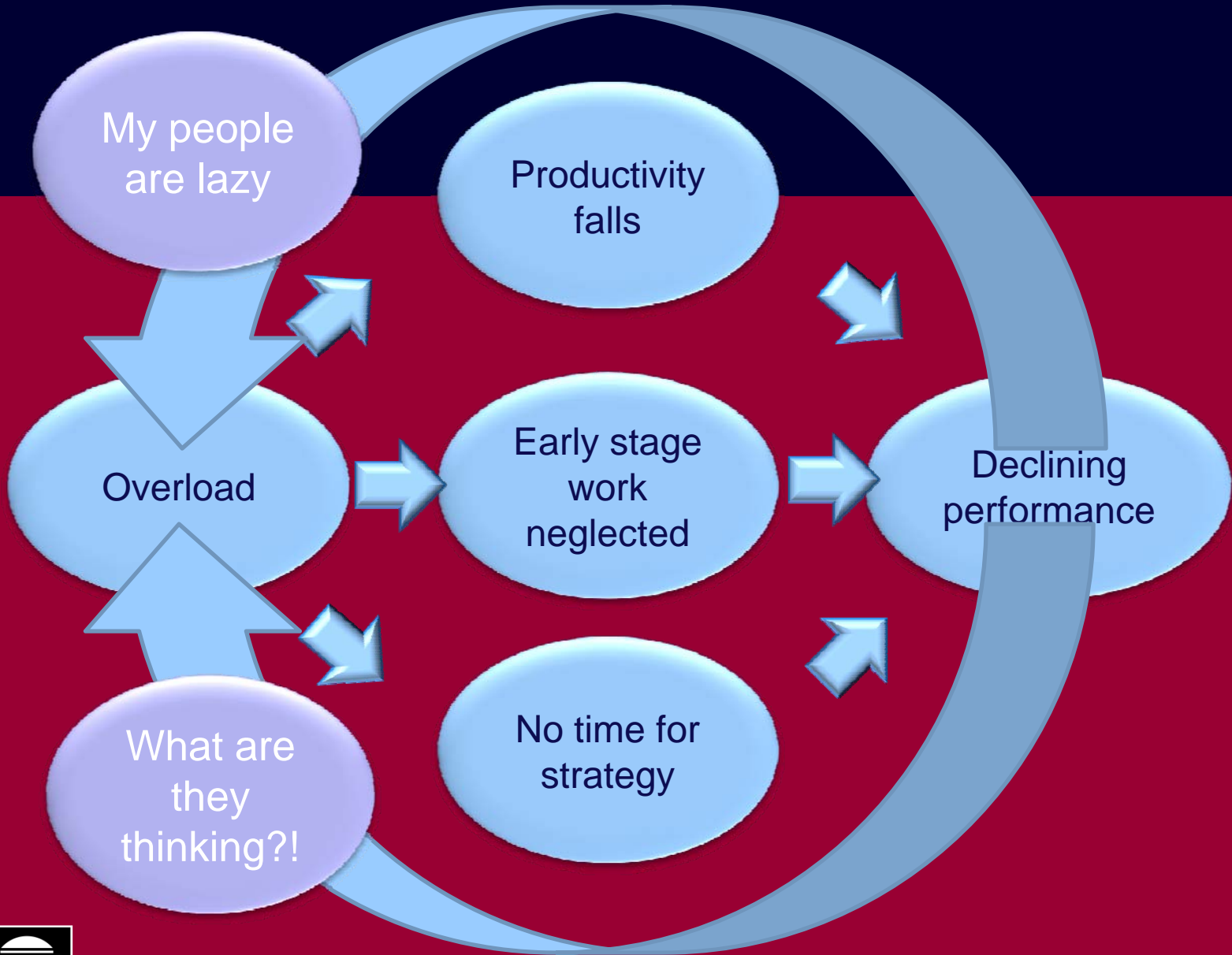


Why is it so hard to kill project #26?

- It's a “good” project!
- Good managers can meet stretch goals
(and I'm a good manager)
- Making difficult decisions would imply that we:
 - Had a strategy that we could use
 - Could talk to each other in productive ways
- *It's very hard to do either when you're overloaded*







My people
are lazy

Overload

We're not
so bright,
either

!!



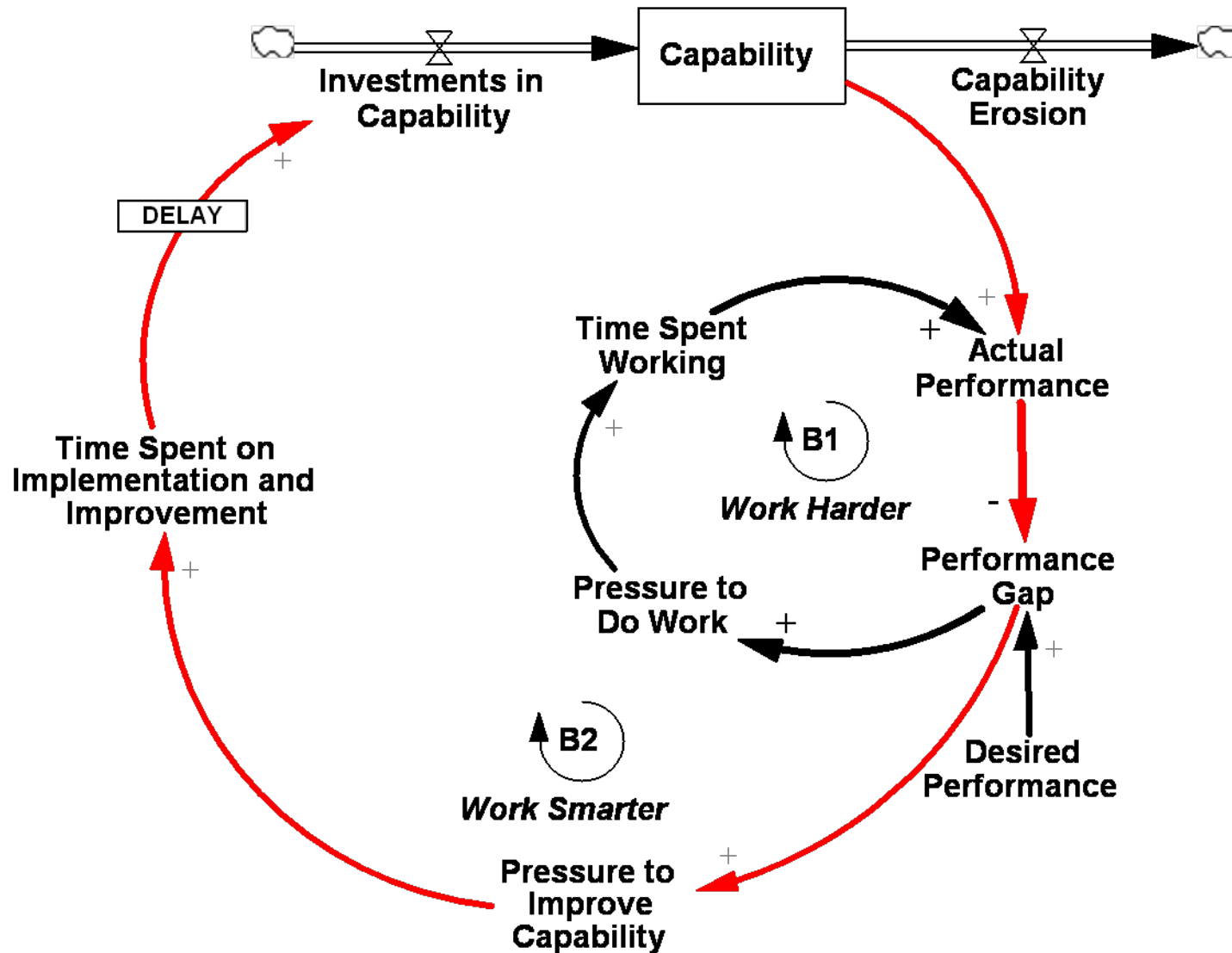


Part 2

Really fixing the problem
will hurt (short term)
performance



Work smarter or work harder?

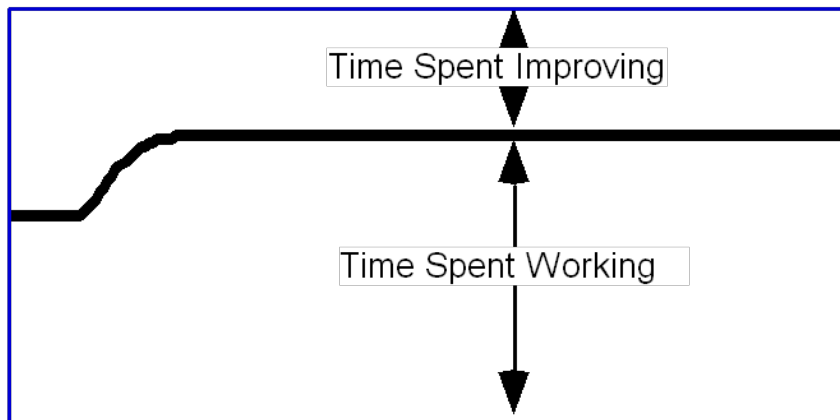




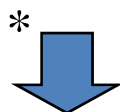
Working harder yields
“better before worse”



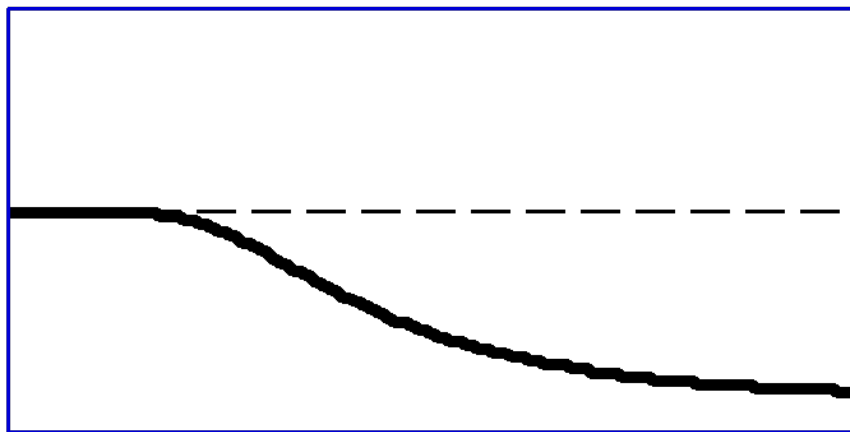
Effort



Time

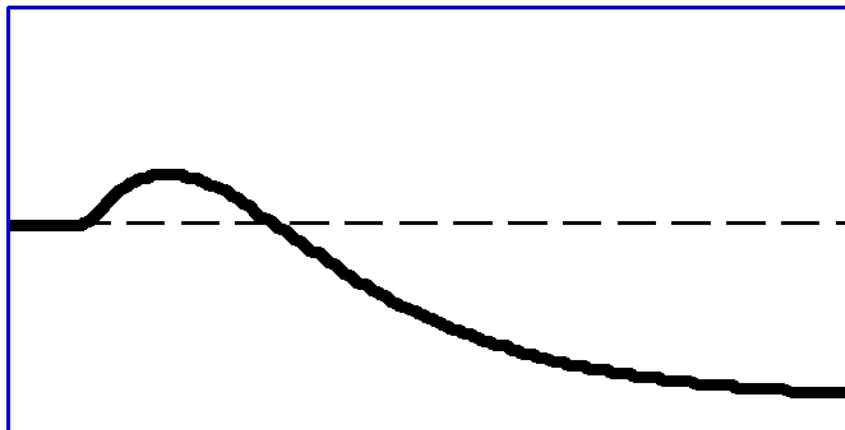


Capability



Time

Actual Performance



Time

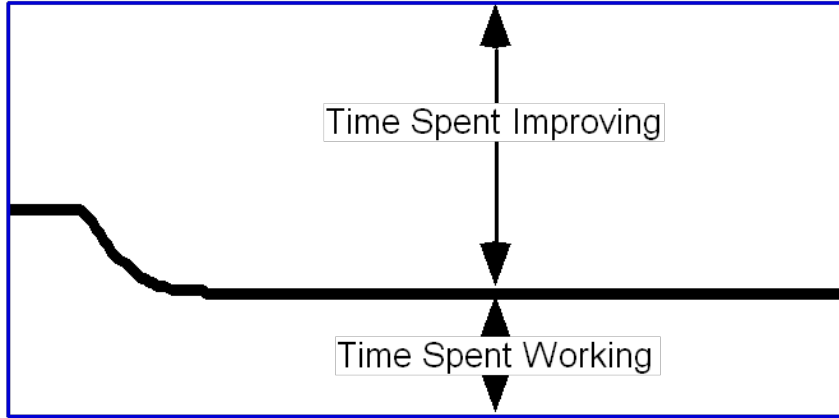
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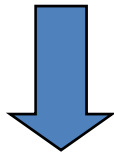
Working smarter yields
“worse before better”



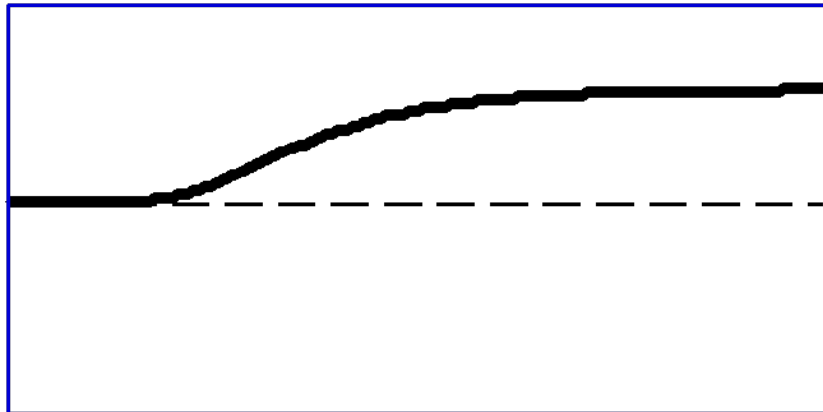
Effort



Time



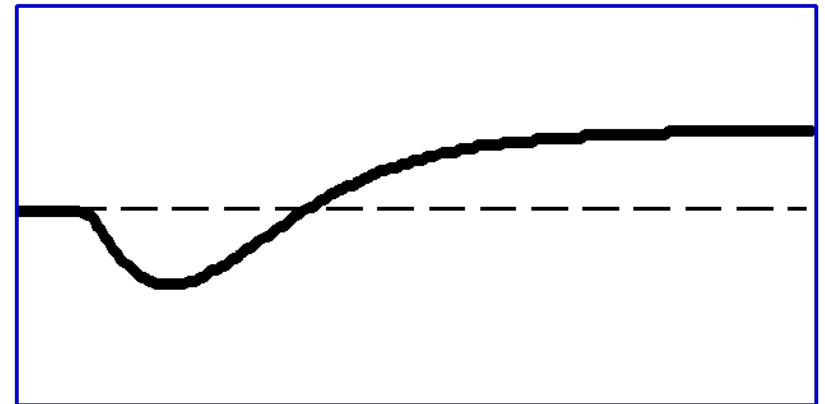
Capability



Time

Actual Performance

=



Time



What can be done?



Then:

- Have a clear strategy and live by it
- Manage capacity & make decisions
 - We found that we'd never shipped more than one new model...
- Face (and manage) “worse before better”
 - One bold leap or many small steps?
- Change your habits around problems
 - Respond to a screw-up as though it were a capability problem
- Build new kinds of conversations
 - This would only work if we told each the truth, wouldn't it?



WHAT DOES THIS IMPLY FOR THOSE WHO WANT TO LEAD THE TRANSITION TO SUSTAINABILITY?

