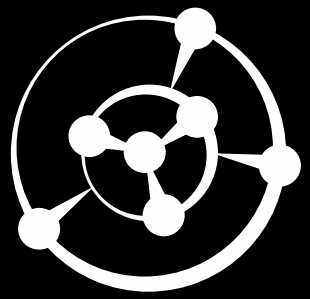

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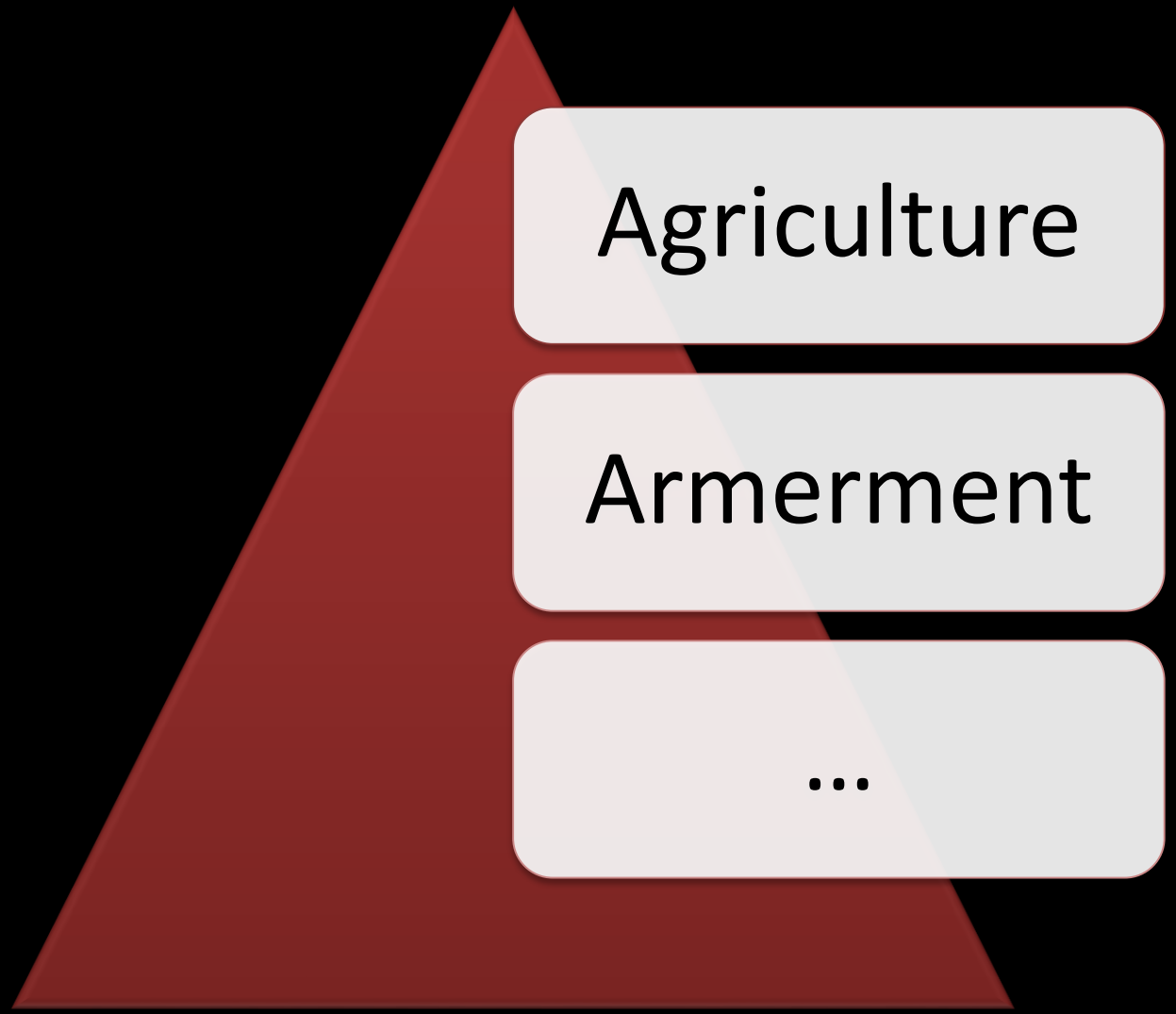
the automation experts

Enterprise IT Under Siege
How Changing an Automation Paradigm Can Change the Odds

Hans-Christian "Chris" Boos @boosc

10th December 2014

The Economic Food Chain



The world as it was a long time ago

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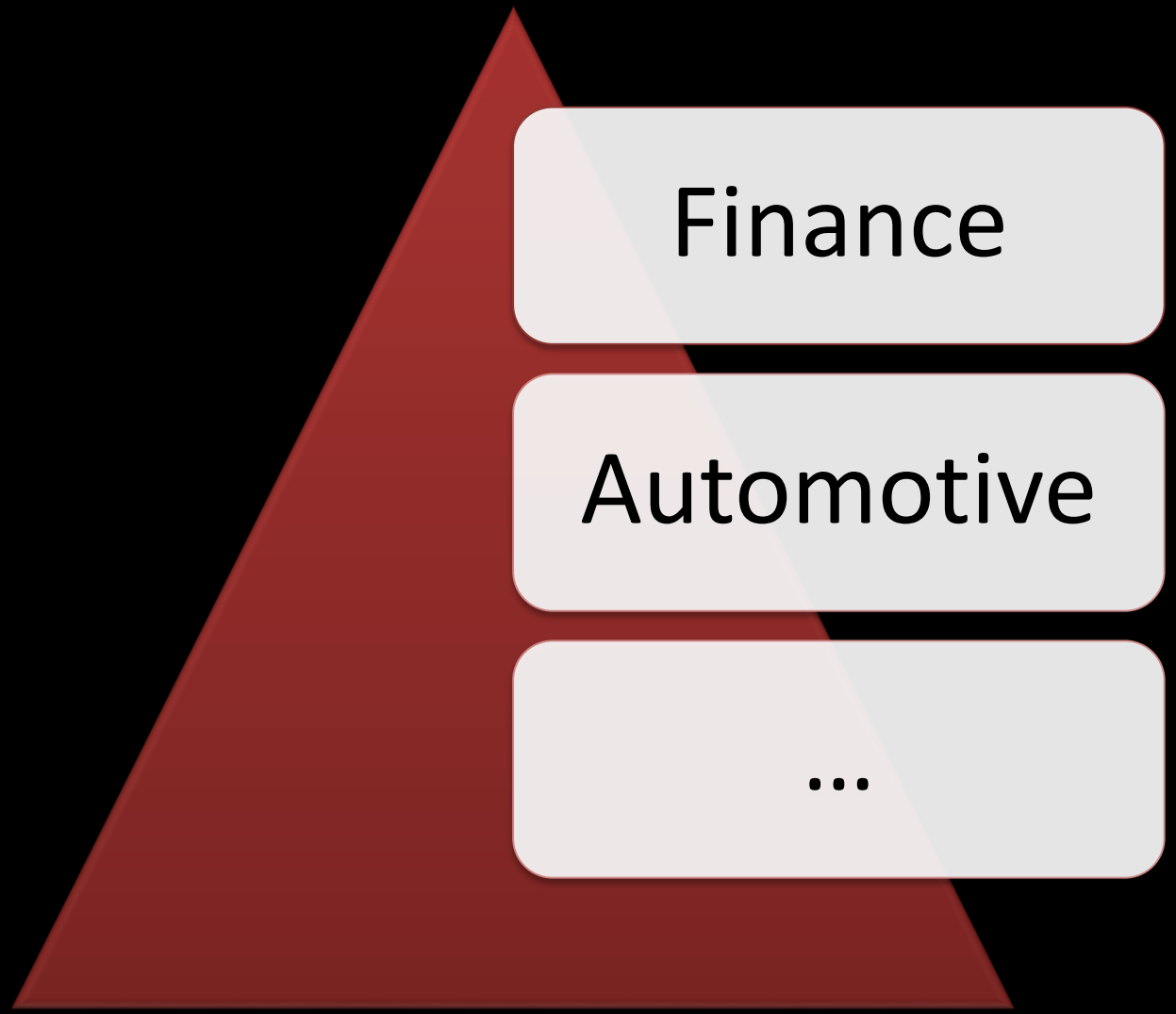

The world as it was only yesterday

The world as it is today

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The Enterprise Disadvantage

Operations
Keeping the lights on
Job Preservation

Change
Redoing Business
Reinvention

Operational spend

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A.C.I.D.

Design for avoiding mistakes

B.A.S.E.

Design for rapid recovery

Legacy thinking

Strategic Change

Self Preservation

Sheep like Execution

Middle management

Innovator’s dilemma

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How Automation Can Help

Lower cost

Free up minds in the war for talent

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Retain knowledge

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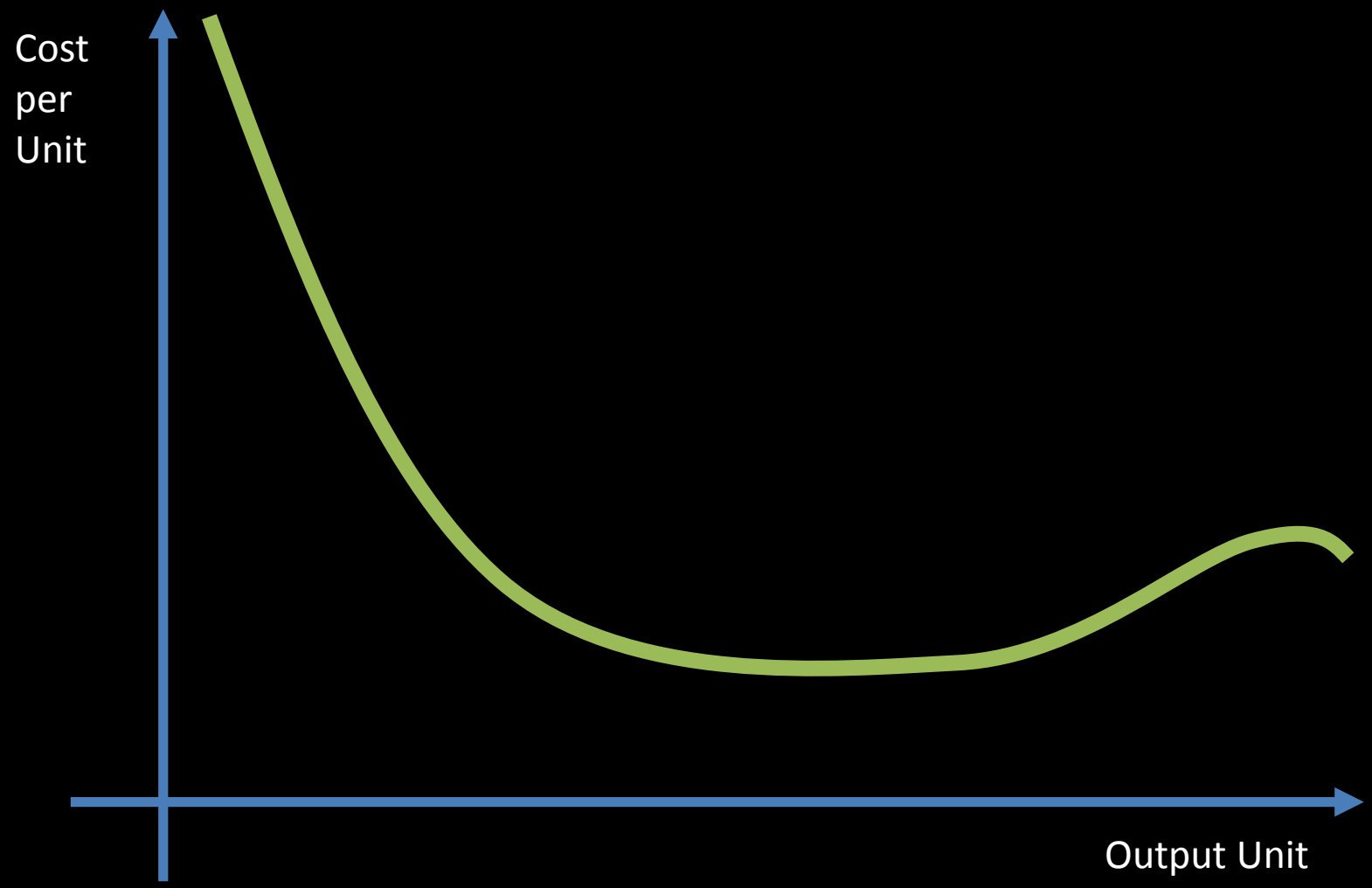
Classic Automation
and why it only went that far

Industrialization



Economies of scale

Sphere of influence too small to create true standard

Part of stack that can be consolidated too small

Lock-in to legacy environments to justify investment

Economies of scale backfire in IT

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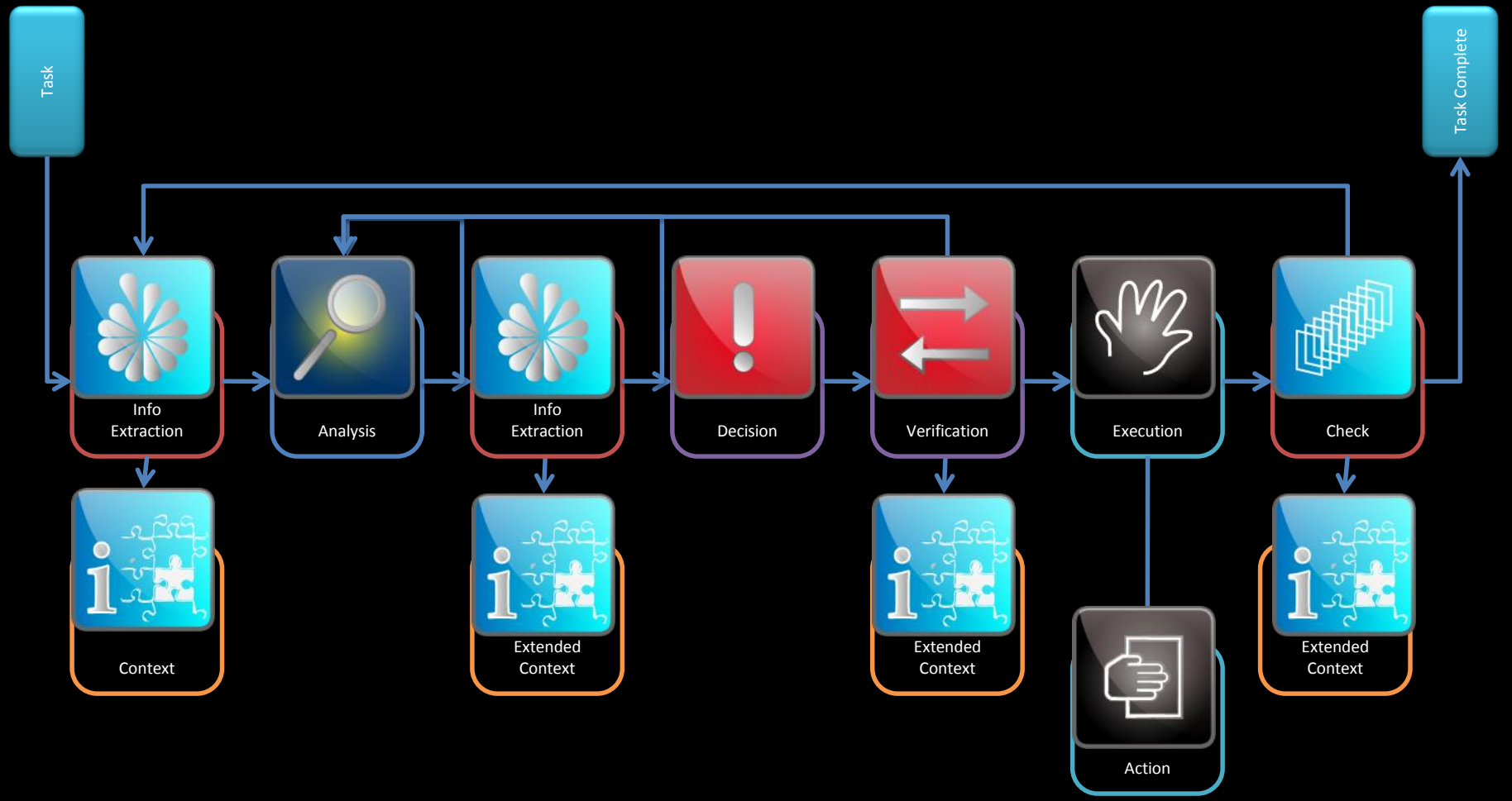
What We'd Actually Need:
Smart People



How do smart people work?

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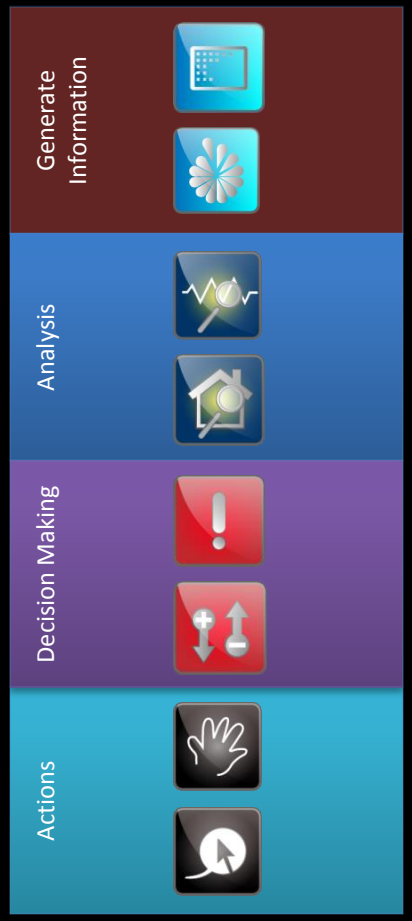
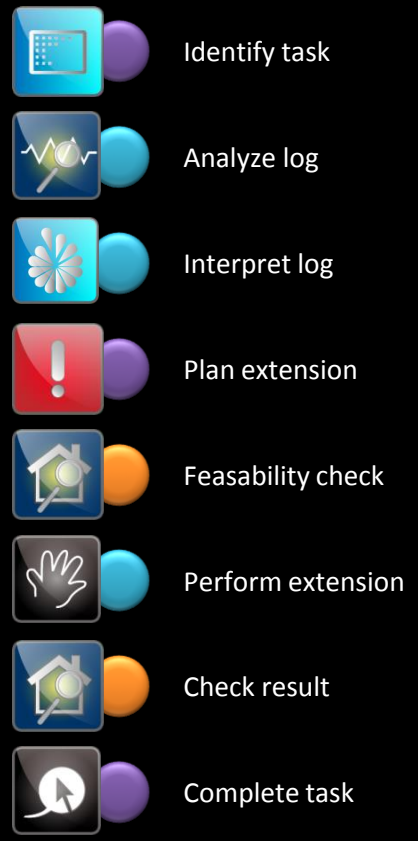
Knowledge

Application of Knowledge



Sample



A smart Machine that works like an experts

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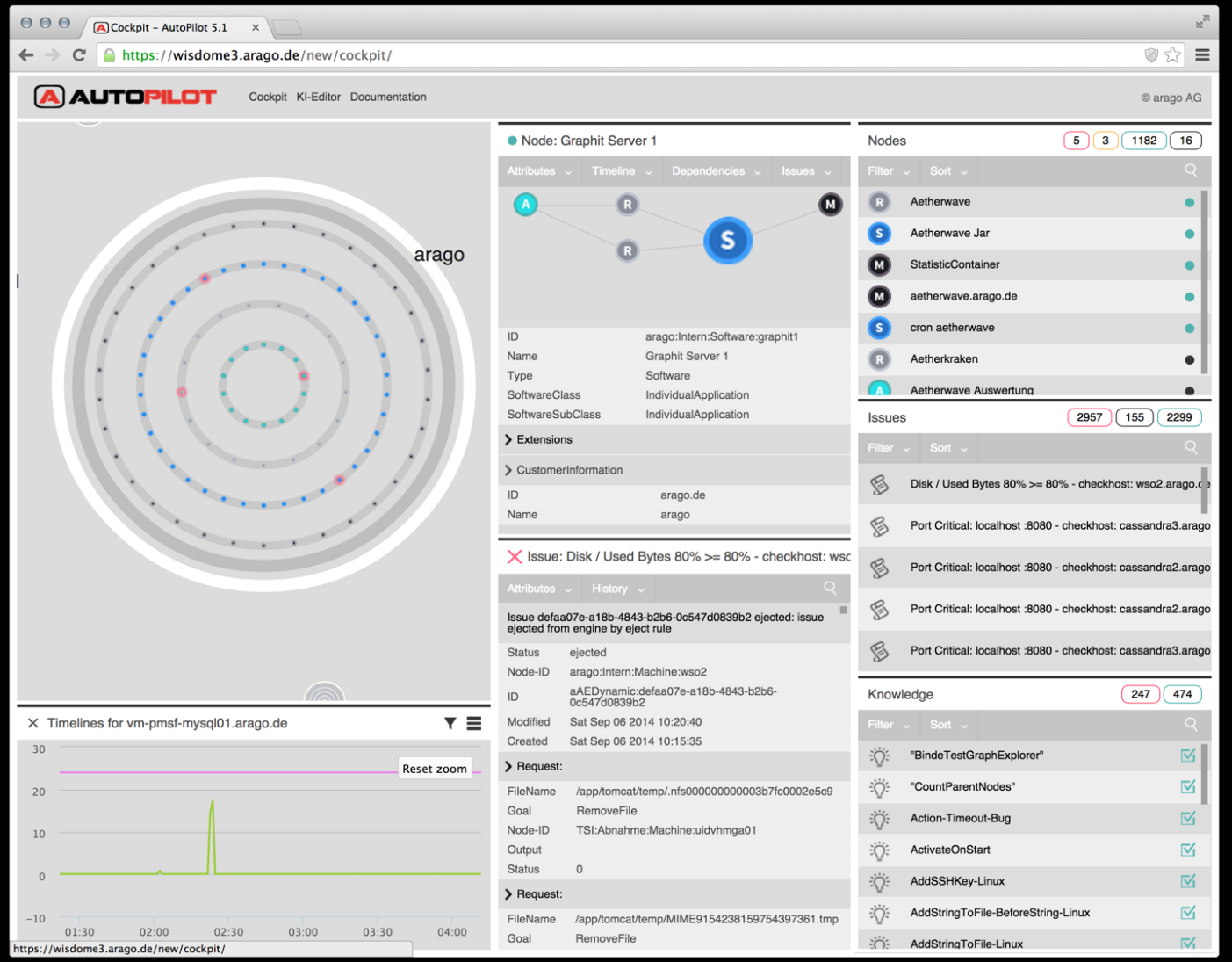
Now for some Voodoo



Less Intrusive

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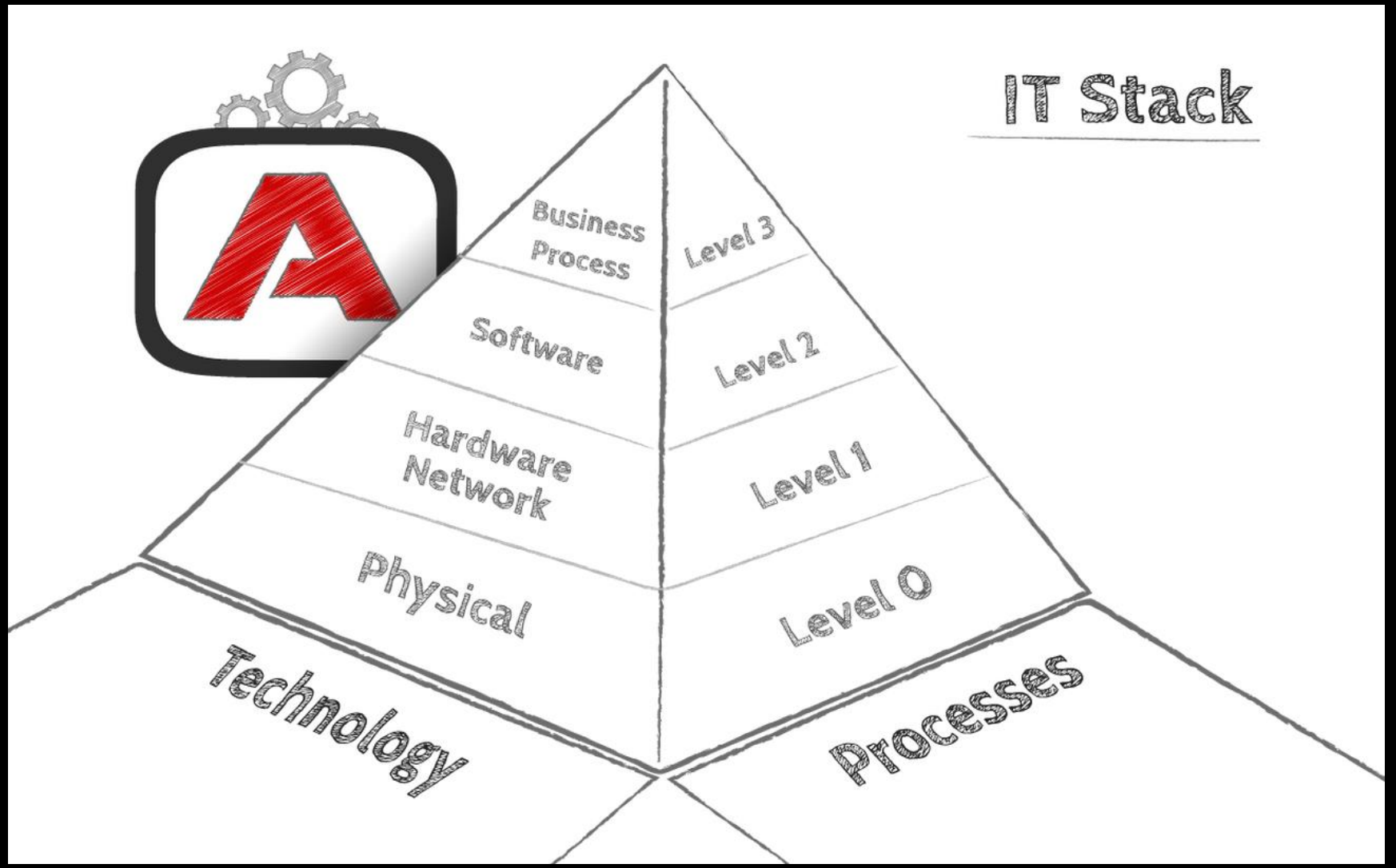

Applicable throughout the stack

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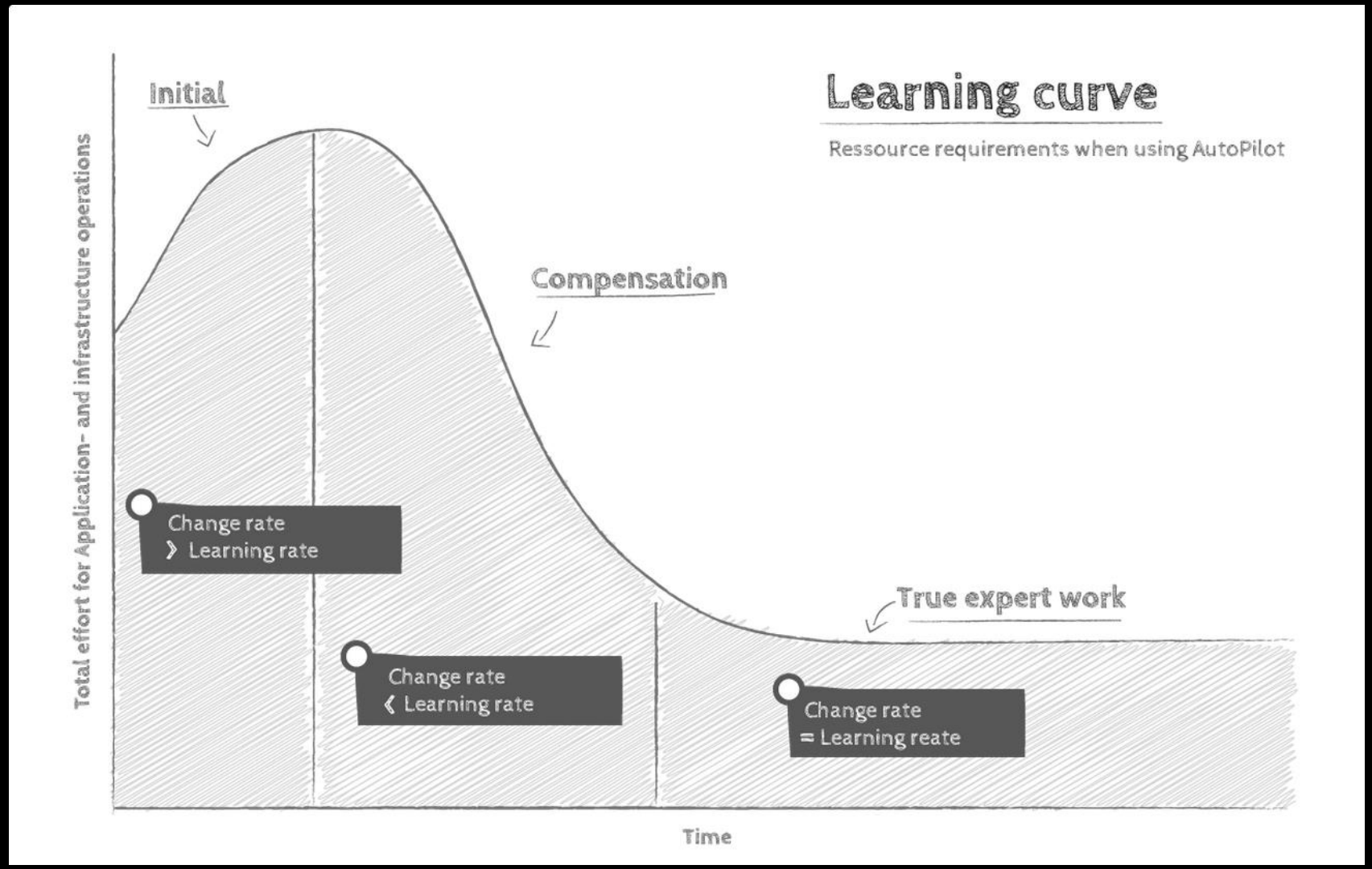
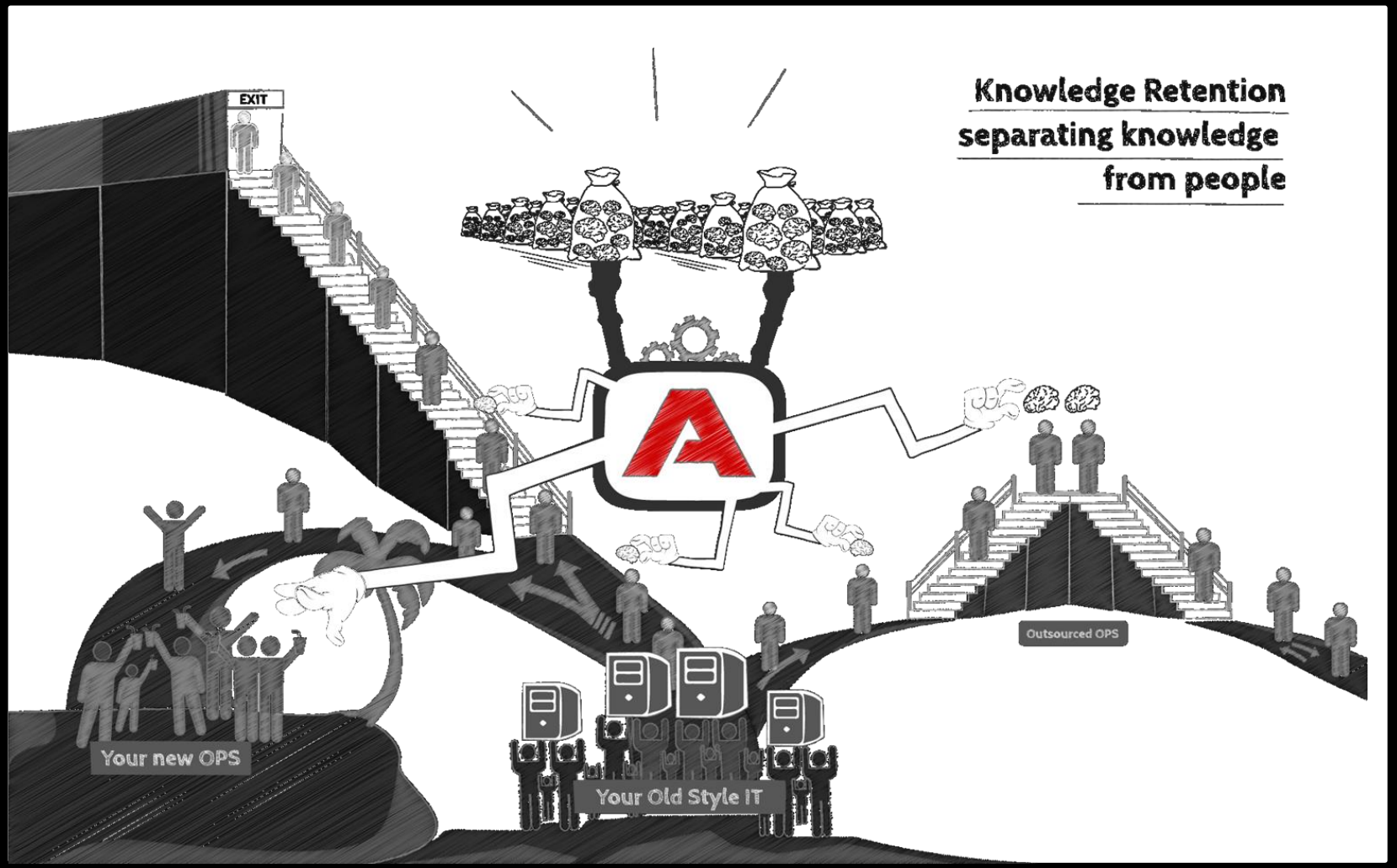


Adapts to change



Retains knowledge

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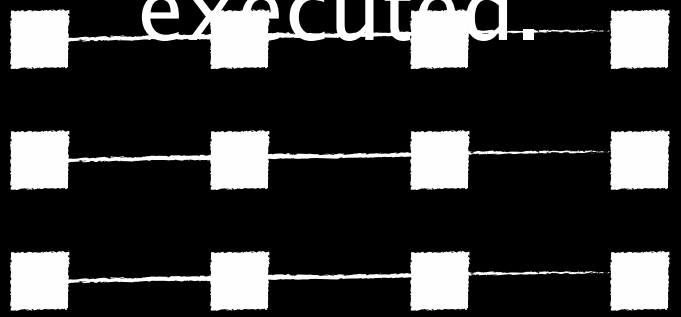
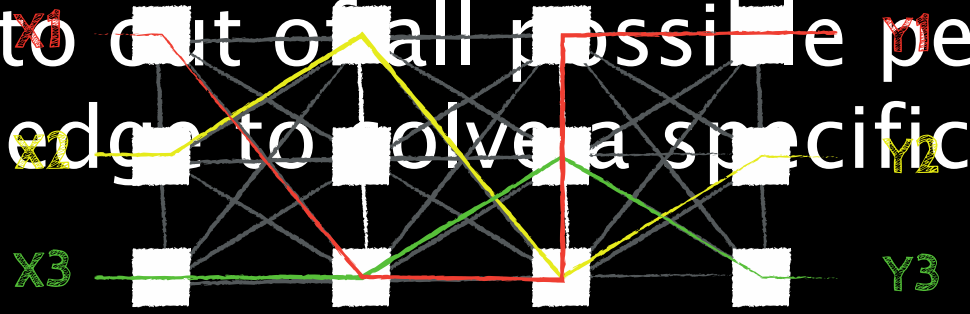
How Is this Different

Standard operating procedures, scripts, etc. all look the same: a predefined sequence of steps to be executed.



In Autonomics the results looks much like a script, BUT it actually is a solution specifically compiled automatically to cut of all possible permutations of knowledge to solve a specific task.



Same same, but different

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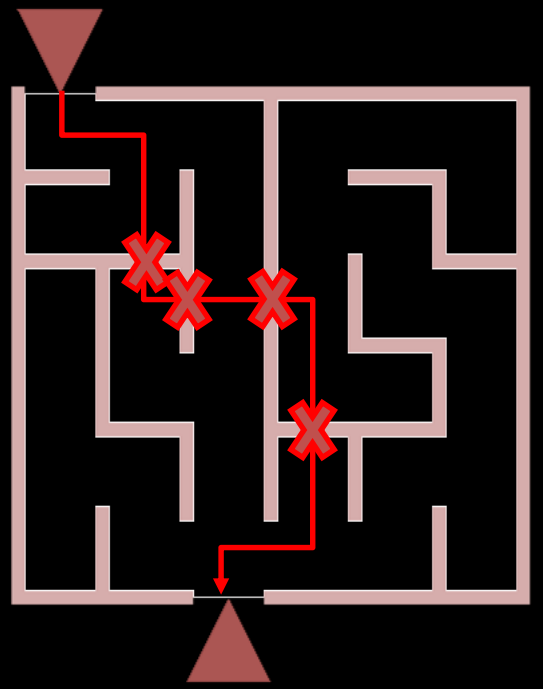

```
1. Go forward 1
2. Turn left
3. Go forward 1
4. Turn Right
5. Go forward 2
6. Turn left
7. Go forward 2
8. Turn Right
9. Go forward 3
10.Turn Right
11.Go forward 1
12.Turn left
13.Go forward 1
```

Scripts vs. Autonomics – the SOP

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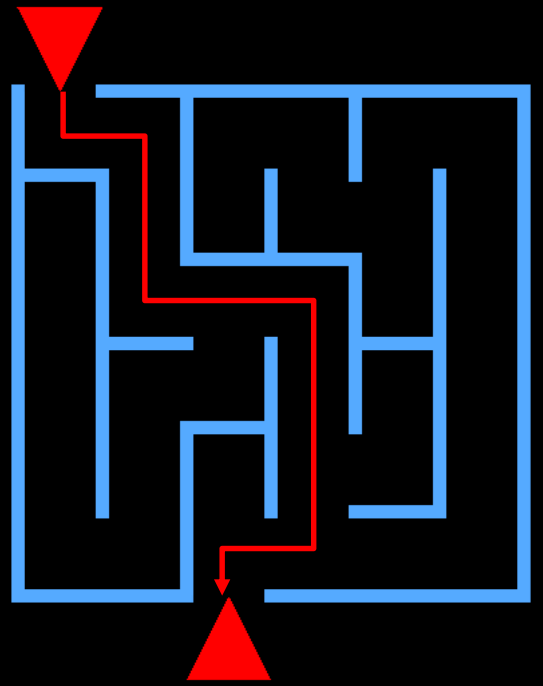

```
1. Go forward 1
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5. Go forward 2
6. Turn left
7. Go forward 2
8. Turn Right
9. Go forward 3
10.Turn Right
11.Go forward 1
12.Turn left
13.Go forward 1
```

Scripts vs. Autonomics – the smart machine

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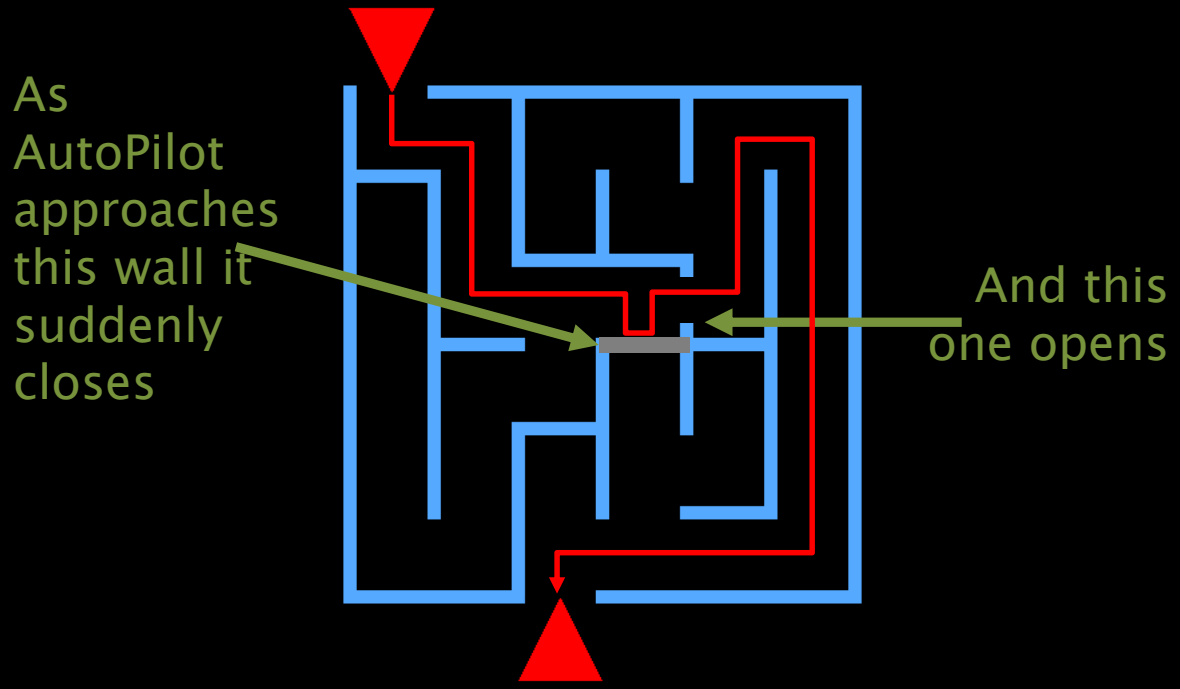


Unexpected events

Storage Management	OpSys Management	Application Management
Make more disks available to volume manager	Extend operating system volume to make space available to application	Shut down and revive the application for the procedure and know when that is possible

To write an old style automation to perform this ultra simple task these three “cylinders of excellence” have to cooperate, coordinate, etc. – how likely will change be possible?

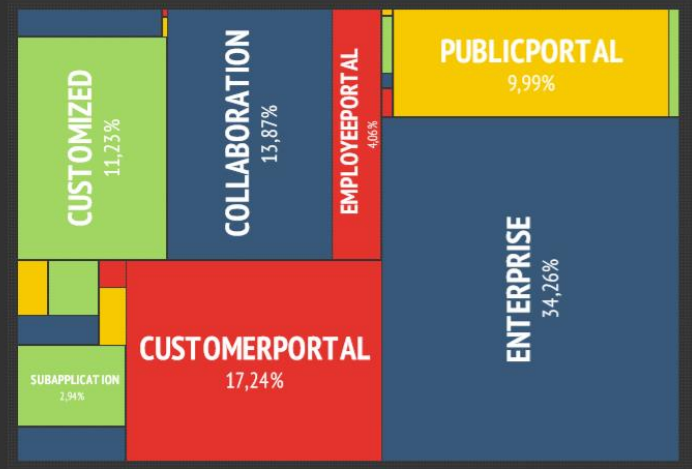
In Autonomics each expert put in special knowledge, the machine puts it together as needed and no overhead is required.

Results that Matter

Applicability Distribution Throughout the Stack

Application Automation
69.78% of 46,138 Issues

For business applications our automation rate achieved is 69.78%. The graphic below shows the distribution (larger means more) of tickets solved by AutoPilot for the respective application type.

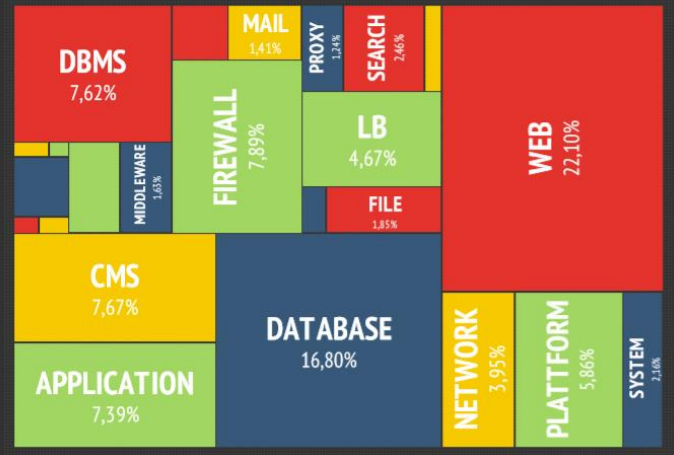


Resource Automation
97.67% of 254,298 Issues

For resources our automation rate achieved is 97.67%. The graphic below shows the distribution (larger means more) of tickets solved by AutoPilot for the respective application type. Resource:Resource in this depiction stands for individual software solutions employed by clients.

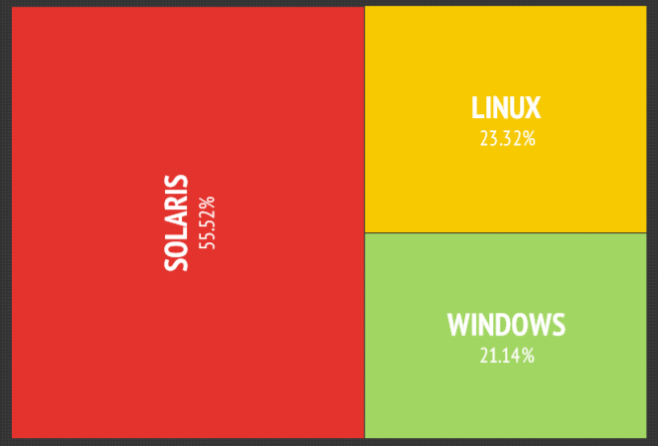
Software Automation
87.90% of 988,498 Issues

For business software our automation rate achieved is 87.90%. The graphic below shows the distribution (larger means more) of tickets solved by AutoPilot for the respective software type.



Machine Automation
83.85% of 663,975 Issues

For machine types our automation rate achieved is 83.85%. The graphic below shows the distribution (larger means more) of tickets solved by AutoPilot for the respective machine type.



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	Technology	# Operations Issues	KI Develoepd	Effort Savings
Platform as a Service	Database (Oracle)	237	58	62%
Infrastructure as a Service	Windows	330	47	59%
	Linux/Unix	280	113	69%
	Storage/ Network	325	150	26%
Total		1172	368	35%

Learning curve of system after 3 months in this environment

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Business Case

	before	traditional	new
Storage	50,79	50,79	26,84
Backup	68,68	68,68	43,63
Compute (incl. NW)	69,93	69,93	28,80
OpSys	30,88	30,88	5,98
Database	15,29	15,29	9,29
Middleware	21,14	21,14	13,81
Manpower	48,28	33.80	24,27
Special Bids	51,62	36.13	38,08
Total Mio €	**356,62**	**326,65**	**190,70**

Case study on a 3 year operating budget:
Before 356M€
After 191M€
Savings 46,34%

Business case on traditional automation was 8,14% savings

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Thank you for your time which we hope was well invested,
because dismissing good ideas can harm your future