

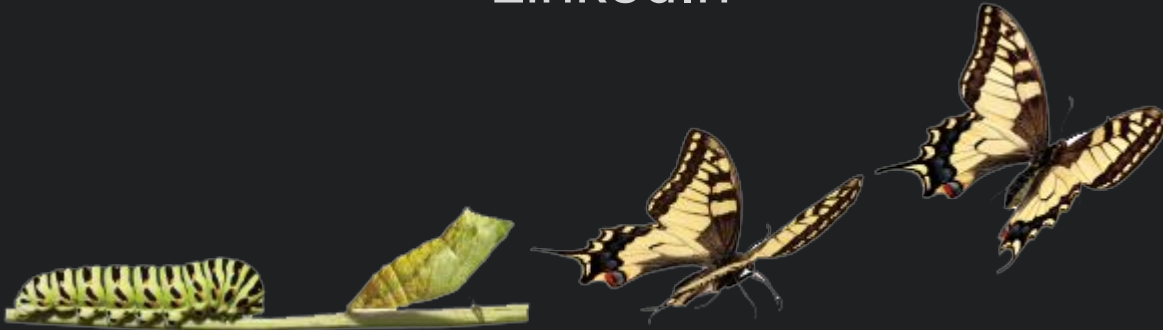
Linked in  TM

Tier 1 Metamorphosis

Nina Mushiana

SRE Manager

LinkedIn



Who Am I!



Topics

- What is Tier 1?
- What Value they provide?
- Issues/Concerns/Roadblocks
- What is needed?
- Our Vision - The LinkedIn Way

What is Tier 1?



Value

- Eyes on the site 24 x 7
- Incident Management
- Alert Management
- Change Management

- **CORRELATION**



Node	Alert Group	Alert Key	Summary	Type
network	load_balancer.1	network	down	
node.2	service.1	description.1	issue.1	
node.3	service.1	description.1	issue.1	
node.4	service.1	description.1	issue.1	
node.5	service.1	description.1	issue.1	
node.6	service.1	description.1	issue.1	
node.7	service.1	description.1	issue.1	
node.1	service.2	description.2	issue.2	
node.2	service.2	description.2	issue.2	
node.3	service.2	description.2	issue.2	
node.4	service.2	description.2	issue.2	
node.5	service.2	description.2	issue.2	
node.6	service.2	description.2	issue.2	
node.7	service.2	description.2	issue.2	
node.8	service.2	description.2	issue.2	
node.9	service.2	description.2	issue.2	
node.10	service.2	description.2	issue.2	
node.11	service.2	description.2	issue.2	
node.12	service.2	description.2	issue.2	
node.1	service.3	description.3	issue.3	
node.2	service.3	description.3	issue.3	
node.3	service.3	description.3	issue.3	
node.4	service.3	description.3	issue.3	
node.5	service.3	description.3	issue.3	
node.6	service.3	description.3	issue.3	
node.7	service.3	description.3	issue.3	
node.8	service.3	description.3	issue.3	
node.9	service.3	description.3	issue.3	
node.10	service.3	description.3	issue.3	
node.11	service.3	description.3	issue.3	

A

B

C



Node	Alert Group	Alert Key	Summary	Type
network	load_balancer.1	network	down	
node.2	service.1	description.1	issue.1	
node.3	service.1	description.1	issue.1	
node.4	service.1	description.1	issue.1	
node.5	service.1	description.1	issue.1	
node.6	service.1	description.1	issue.1	
node.7	service.1	description.1	issue.1	
node.1	service.2	description.2	issue.2	
node.2	service.2	description.2	issue.2	
node.3	service.2	description.2	issue.2	
node.4	service.2	description.2	issue.2	

A

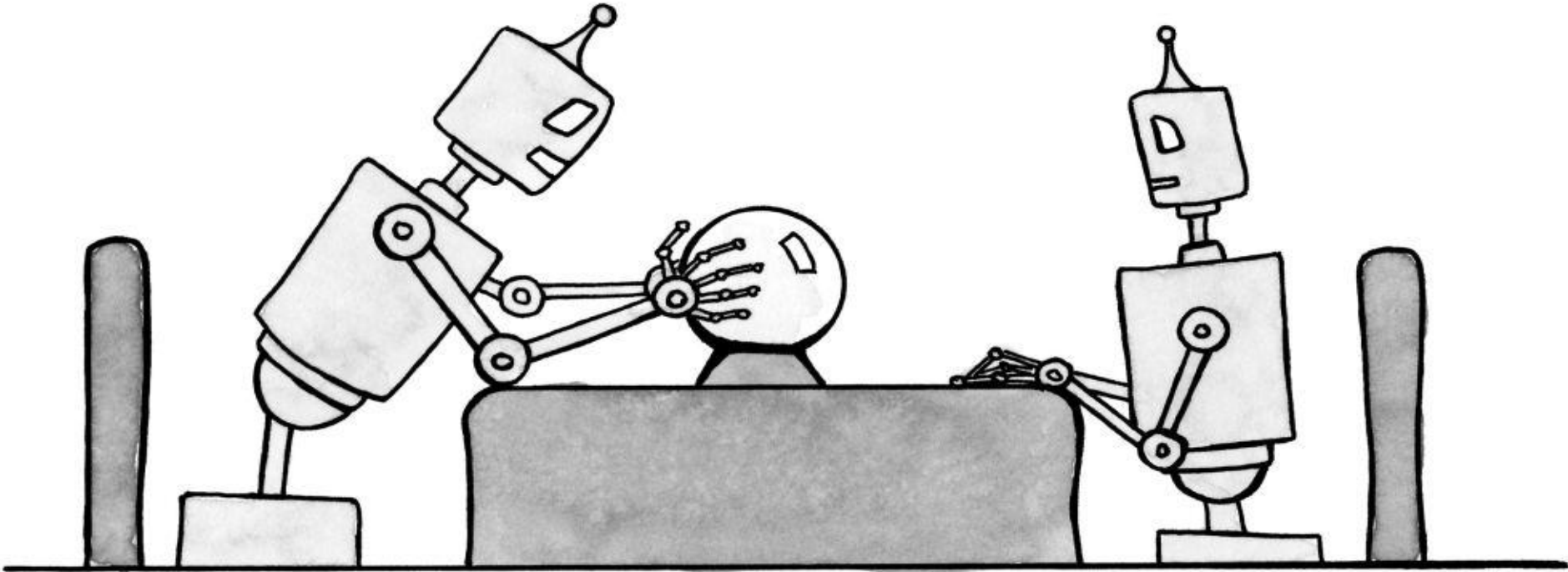
network	load_balancer.1	network	down
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node.9	service.2	description.2	issue.2	
node.10	service.2	description.2	issue.2	
node.11	service.2	description.2	issue.2	
node.12	service.2	description.2	issue.2	
node.1	service.3	description.3	issue.3	
node.2	service.3	description.3	issue.3	
node.3	service.3	description.3	issue.3	
node.4	service.3	description.3	issue.3	
node.5	service.3	description.3	issue.3	
node.6	service.3	description.3	issue.3	
node.7	service.3	description.3	issue.3	
node.8	service.3	description.3	issue.3	
node.9	service.3	description.3	issue.3	
node.10	service.3	description.3	issue.3	
node.11	service.3	description.3	issue.3	

C

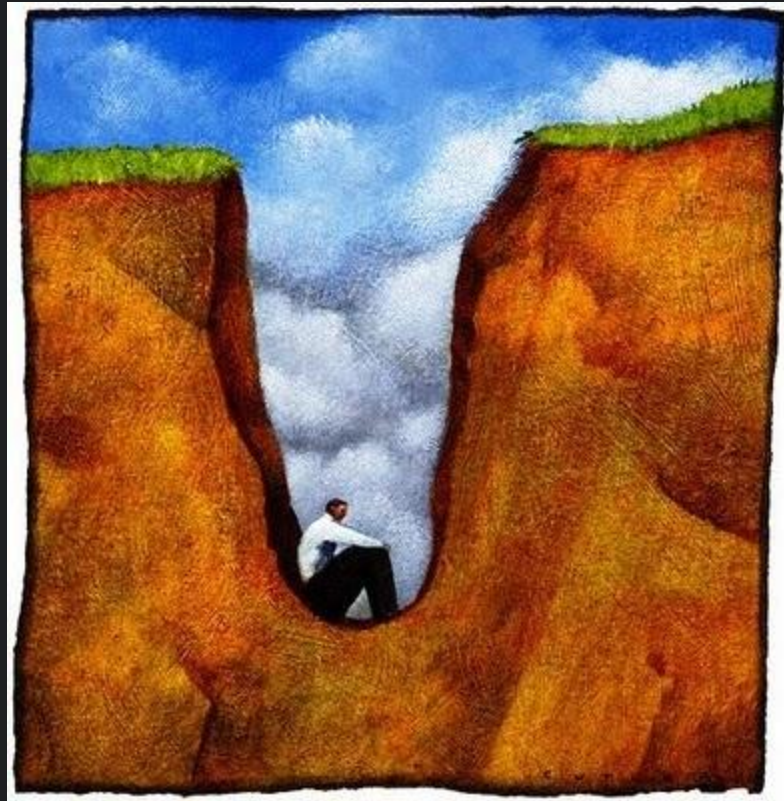
2	0	556	20	32	20
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Issue: Repetitious Tasks

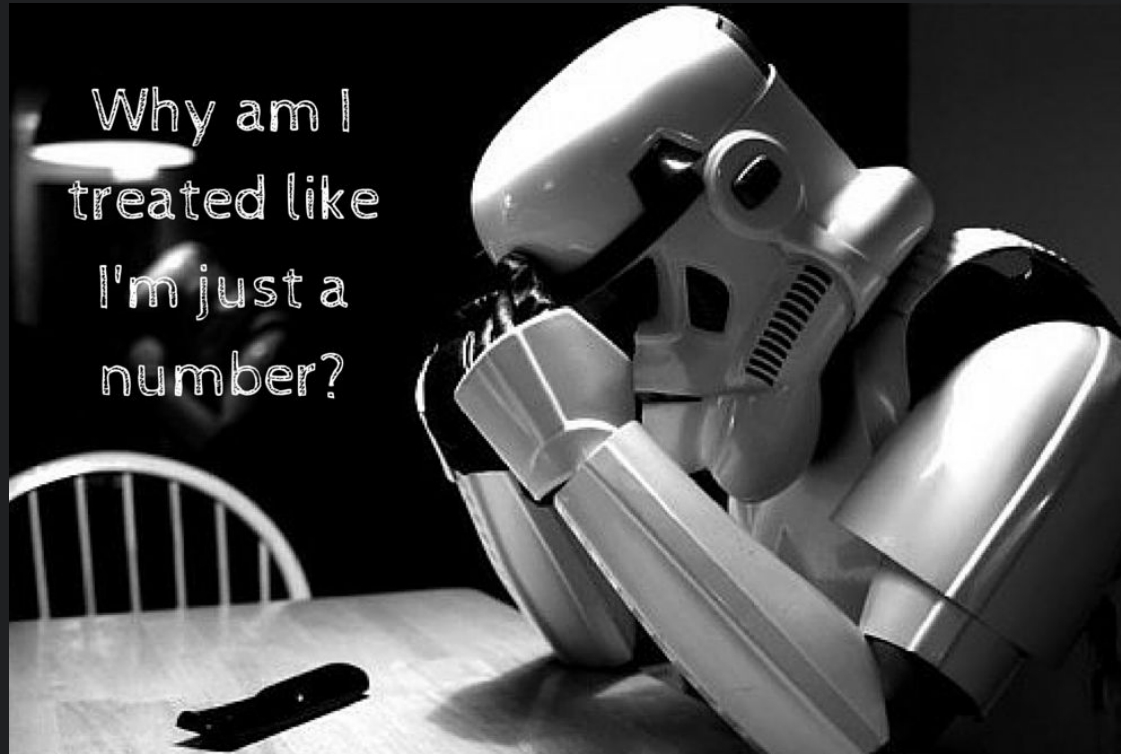


“You will continue to perform the same repetitive tasks that you have always performed.”

Issue: No Career Path



Issue: Low Morale



Why am I
treated like
I'm just a
number?

Impact



What is needed?

TIME



EXPERIENCE



inexperience

MENTORSHIP

A close-up photograph of a hand holding a single yellow seed between the thumb and index finger, positioned just above a mound of dark, rich soil. The background is a blurred field of similar soil and seeds, suggesting a garden or farm setting. The lighting is soft, highlighting the texture of the soil and the smooth surface of the seed.

MENTORSHIP

PLANTING SEEDS OF GROWTH

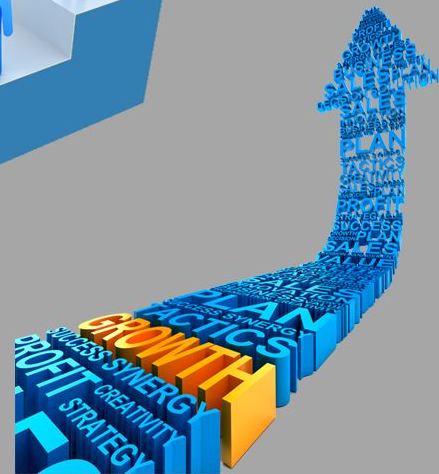
HOW?



VISION



Career Transformation



Monitor Growth



Alert Triggers

Engineer
(auto-escalation)

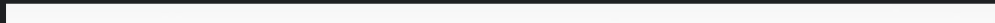
Nurse
(auto-remediation)

If Unable To Resolve



Driving & Resolving Site Critical Issues
Proactively Improve Monitoring

Auto Remediation Engine: Nurse



Auto Remediation Engine: Nurse

- 854k actions taken
- 100% of service health check alerts were automated
- ~37k man hours have been automated
- Now automating ~1100 hours/week

Auto Escalation Tool: **Iris**





Jeff Weiner

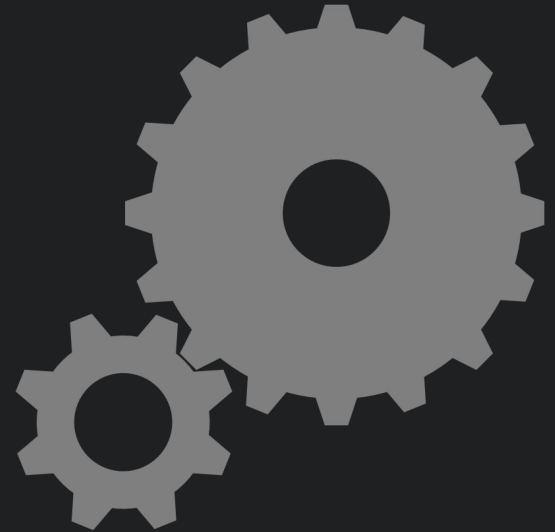
CEO

Mountain View

**Helping people you manage
build new abilities and skills,
work with them to define their
career goals and support
their efforts to
accomplish them.**

SME (Subject Matter Expert)

- Project time
- Train the Trainer
- Depth of knowledge
- Better dedicated service



SME (Subject Matter Expert)



NOC to SRE Transition Process



Mentor, Mentee

SUCCESS

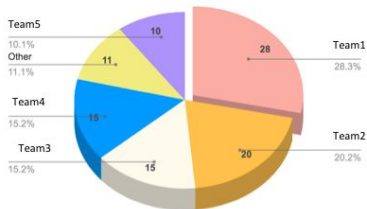


Reset Major Medium Major/Medium Minor Postmortems

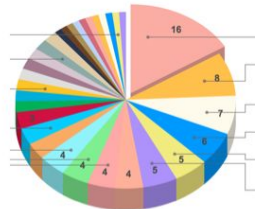
2016-03-19 2016-04-02 Submit

Managers Teams

Breakdown by the Groups



Breakdown by the Teams



Icons for chart interaction

Search:

Mean Time To Detect: $\mu = 119$ minute(s)

Mean Time To Fix: $\mu = 81$ minute(s)

Mean Time To Resolve: $\mu = 280$ minute(s)

Median of the Time To Detect: $\tilde{x} = 132.5$ minute(s)

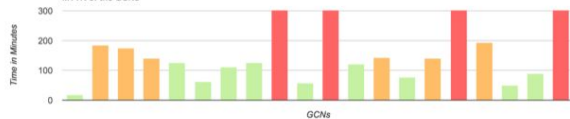
The Median of the Time To Fix: $\tilde{x} = 44.5$ minute(s)

The Median of the Time To Resolve: $\tilde{x} = 78$ minute(s)

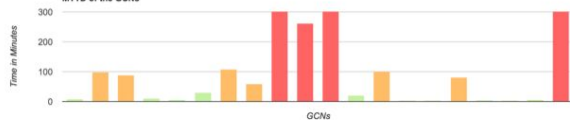
Responsible Causes



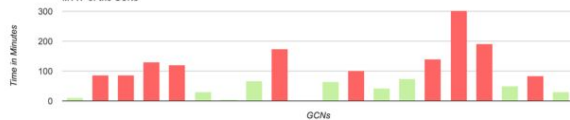
MTR of the GCNs



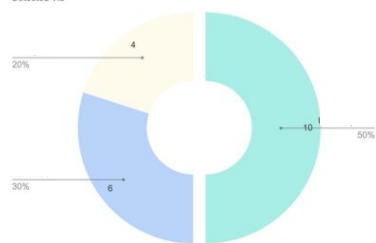
MTD of the GCNs



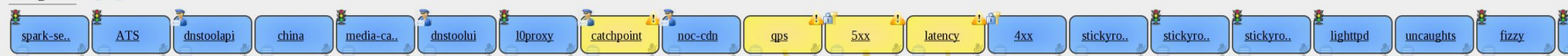
MTF of the GCNs



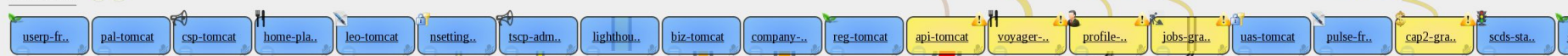
Detected Via



Edge 0



Frontend



Mid tier



Backend



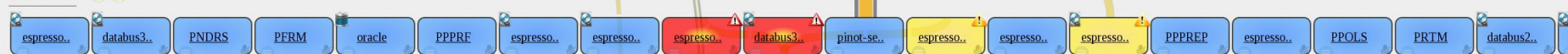
Backend2



Backend3



Databases



Infrastructure

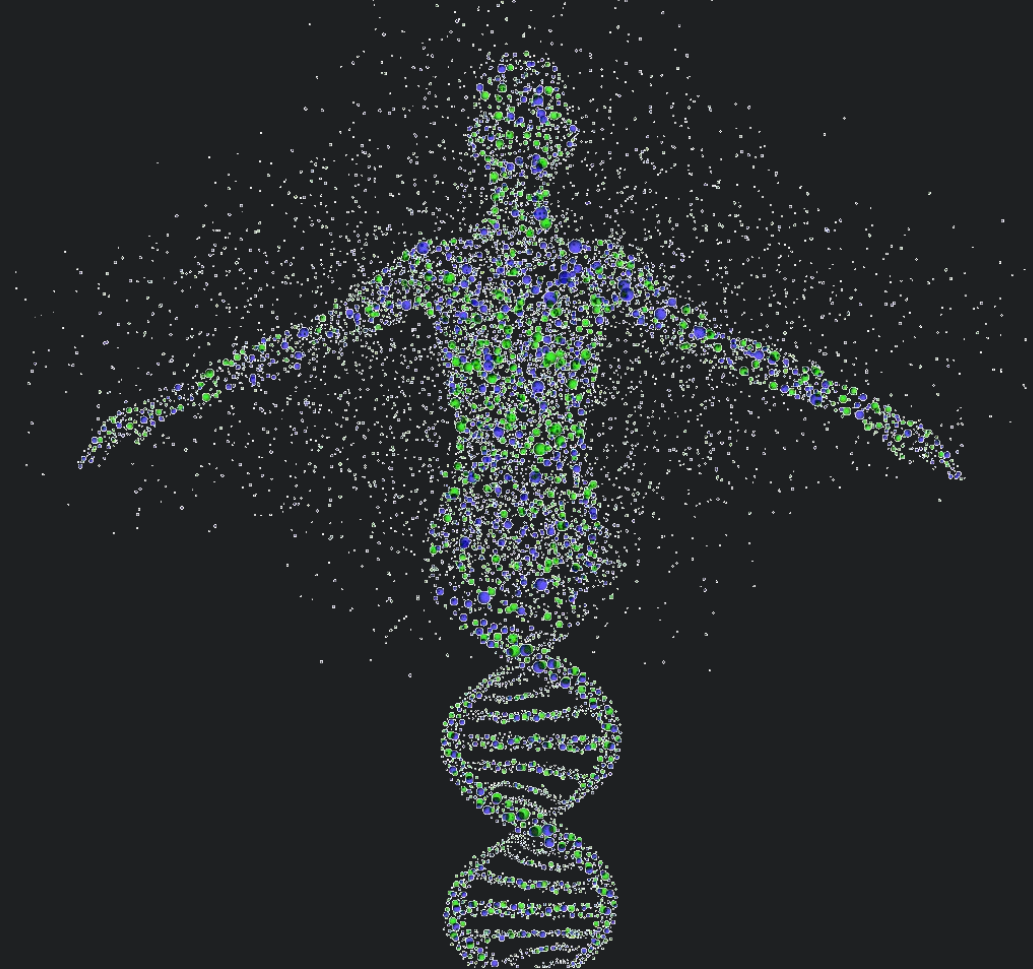


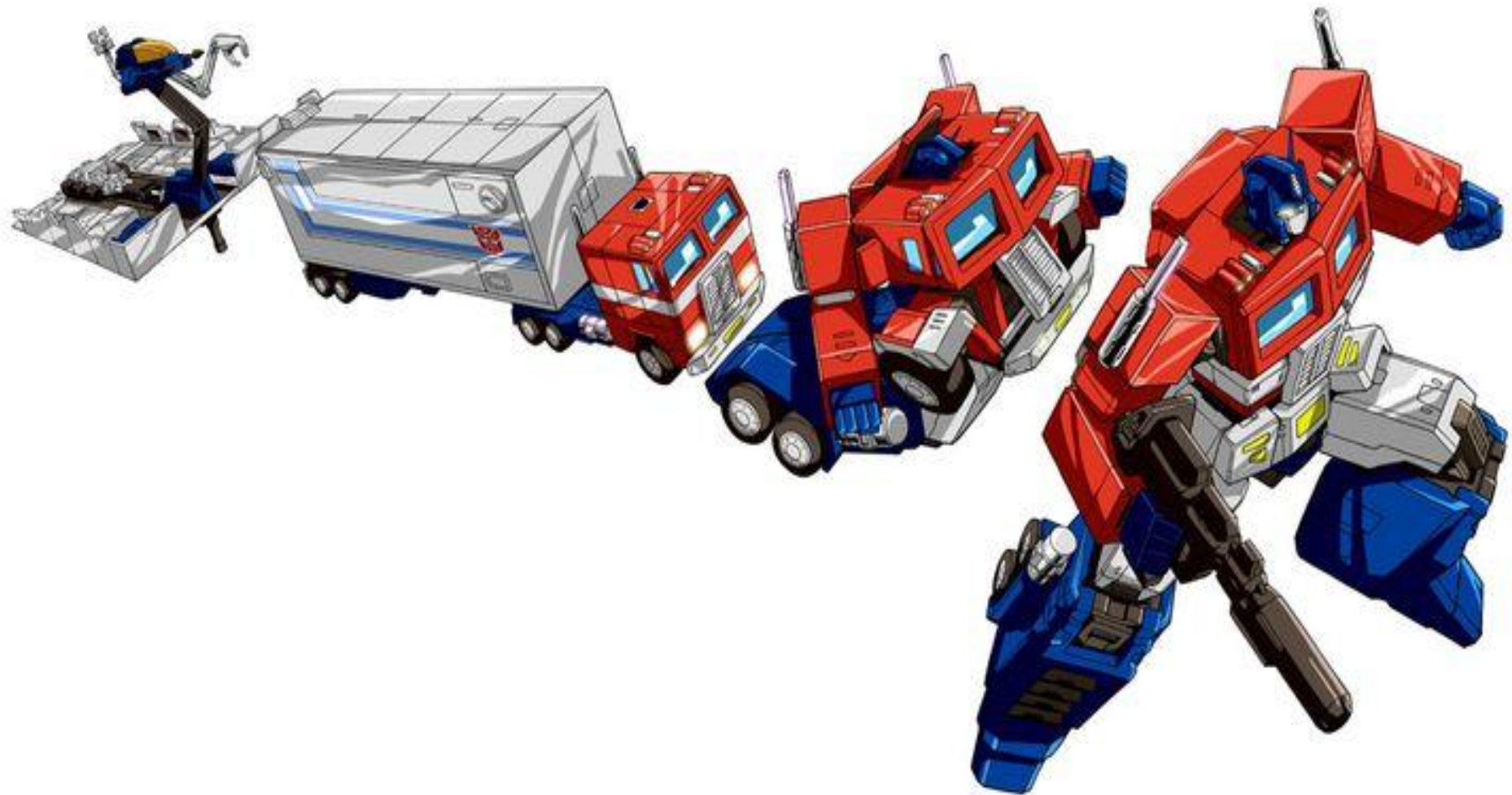
April 1st 2016 06:40:00 AM [Navigation icons] PLAY 1x Fabrics Zones Edit Mode [Search icon] Locate Services: [Input field] [Navigation icons] LEFT RIGHT UP DOWN [Warning icon] [Refresh icon] [Bar chart icon] RESET

im possible

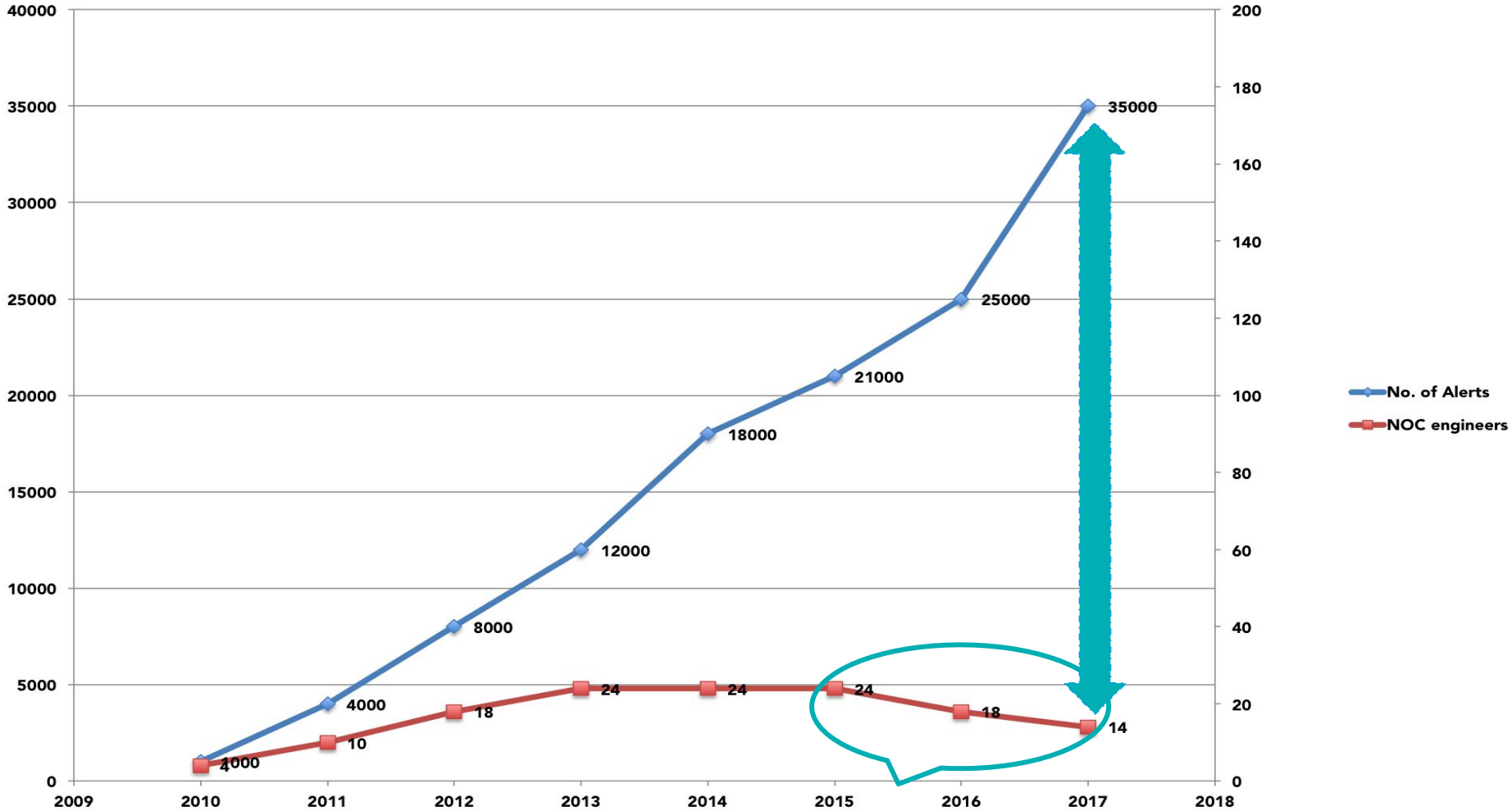


Cultural Impact





Alert Growth vs NOC engineers





Just the beginning

Q & A