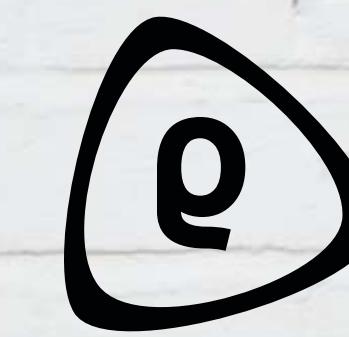


How to do HumanOps



DevOpsDays Amsterdam June 2017
David Mytton, CEO, Server Density



server density



HumanOps

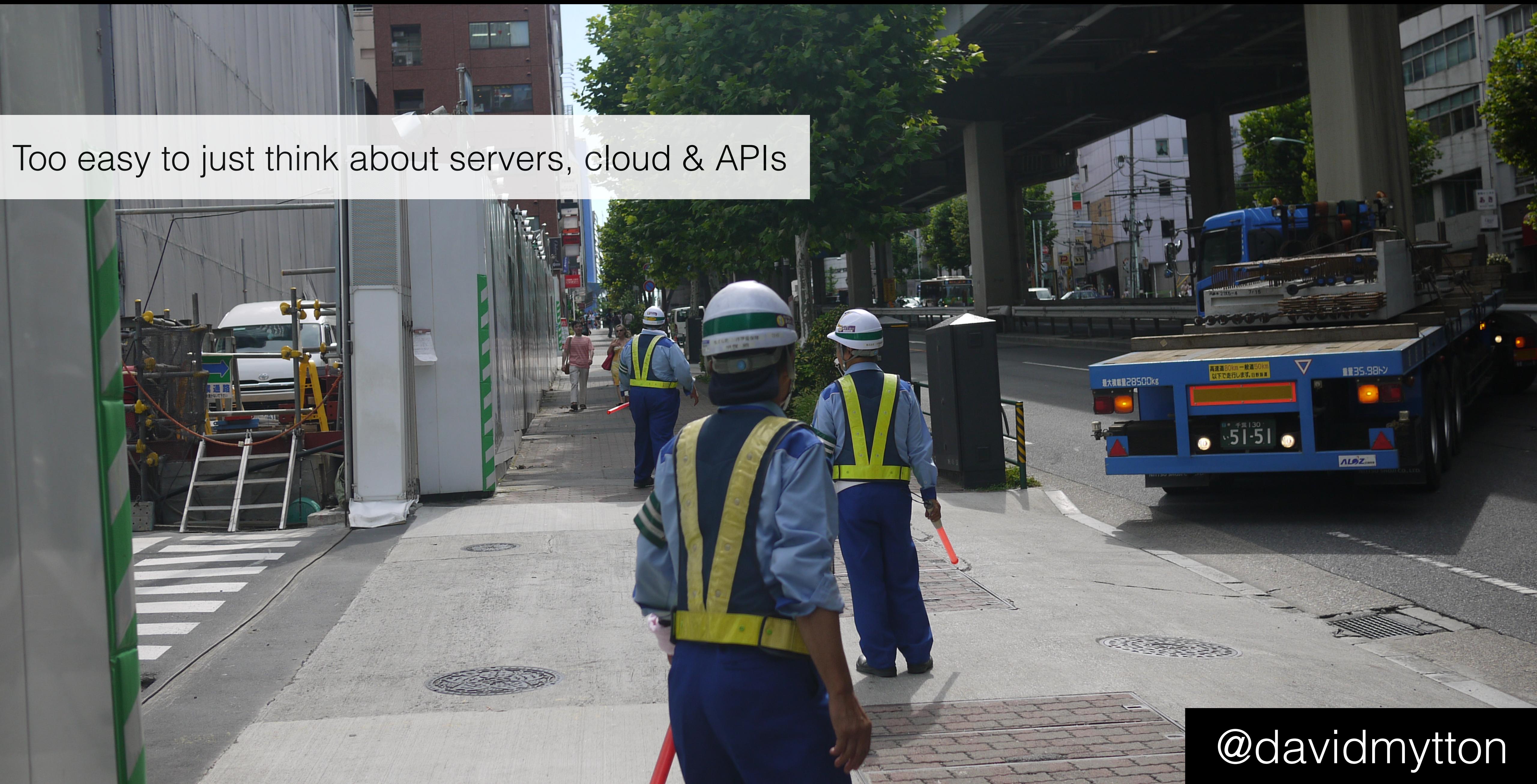
1. Humans build and fix systems



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Too easy to just think about servers, cloud & APIs



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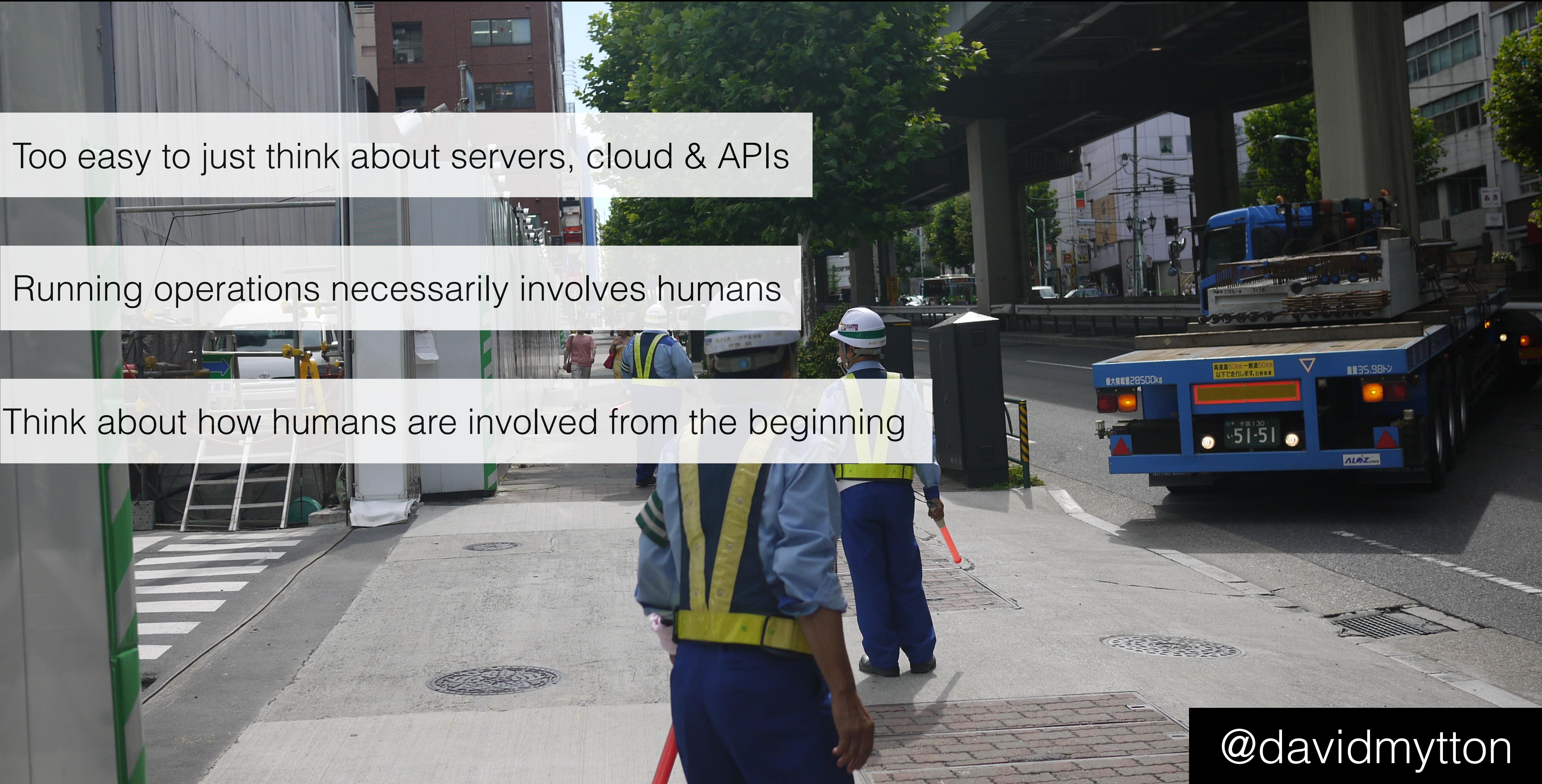
A wide-angle photograph of a construction site in an urban area. In the foreground, several construction workers wearing hard hats and safety vests are standing on a sidewalk. One worker is holding a red traffic cone. To the right, a large blue truck with "ALC" branding is parked on the street. In the background, there are buildings, trees, and a bridge structure.

Too easy to just think about servers, cloud & APIs

Running operations necessarily involves humans

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1. Humans build and fix systems



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How can the system be automated?



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What alerts should involve humans?



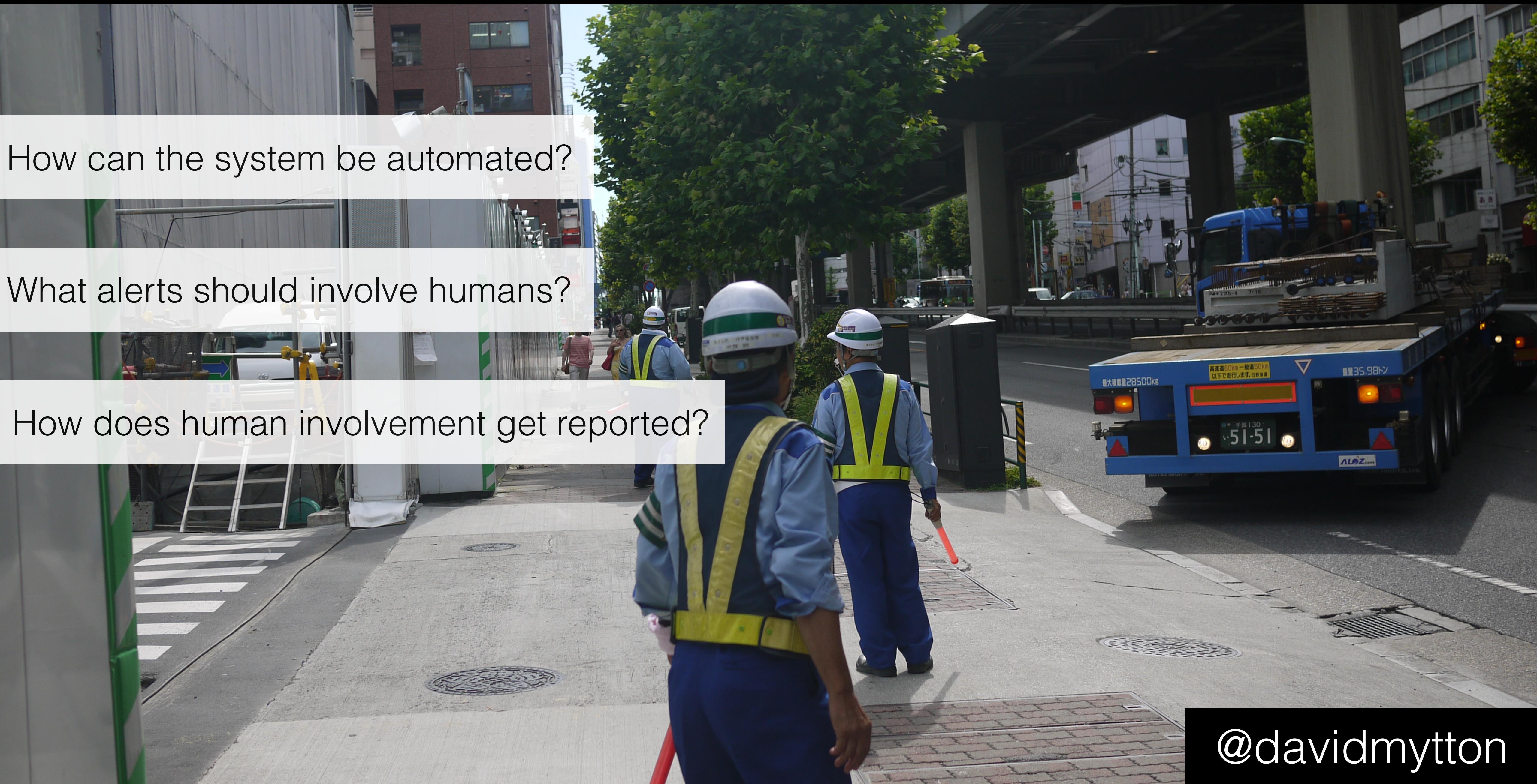
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1. Humans build and fix systems

How can the system be automated?

What alerts should involve humans?

How does human involvement get reported?



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2. Humans get tired and stressed, they feel happy and sad



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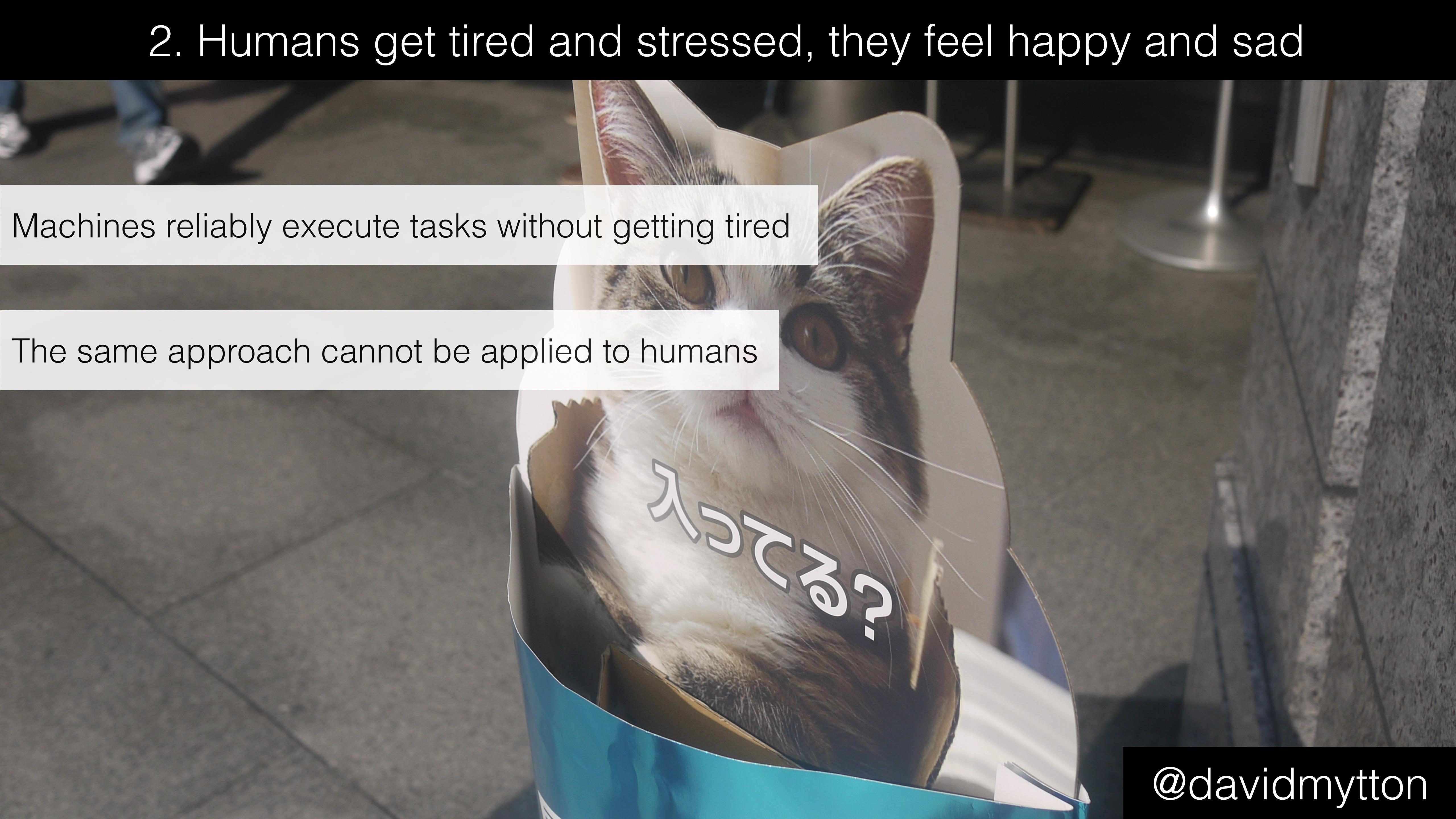
2. Humans get tired and stressed, they feel happy and sad

Machines reliably execute tasks without getting tired

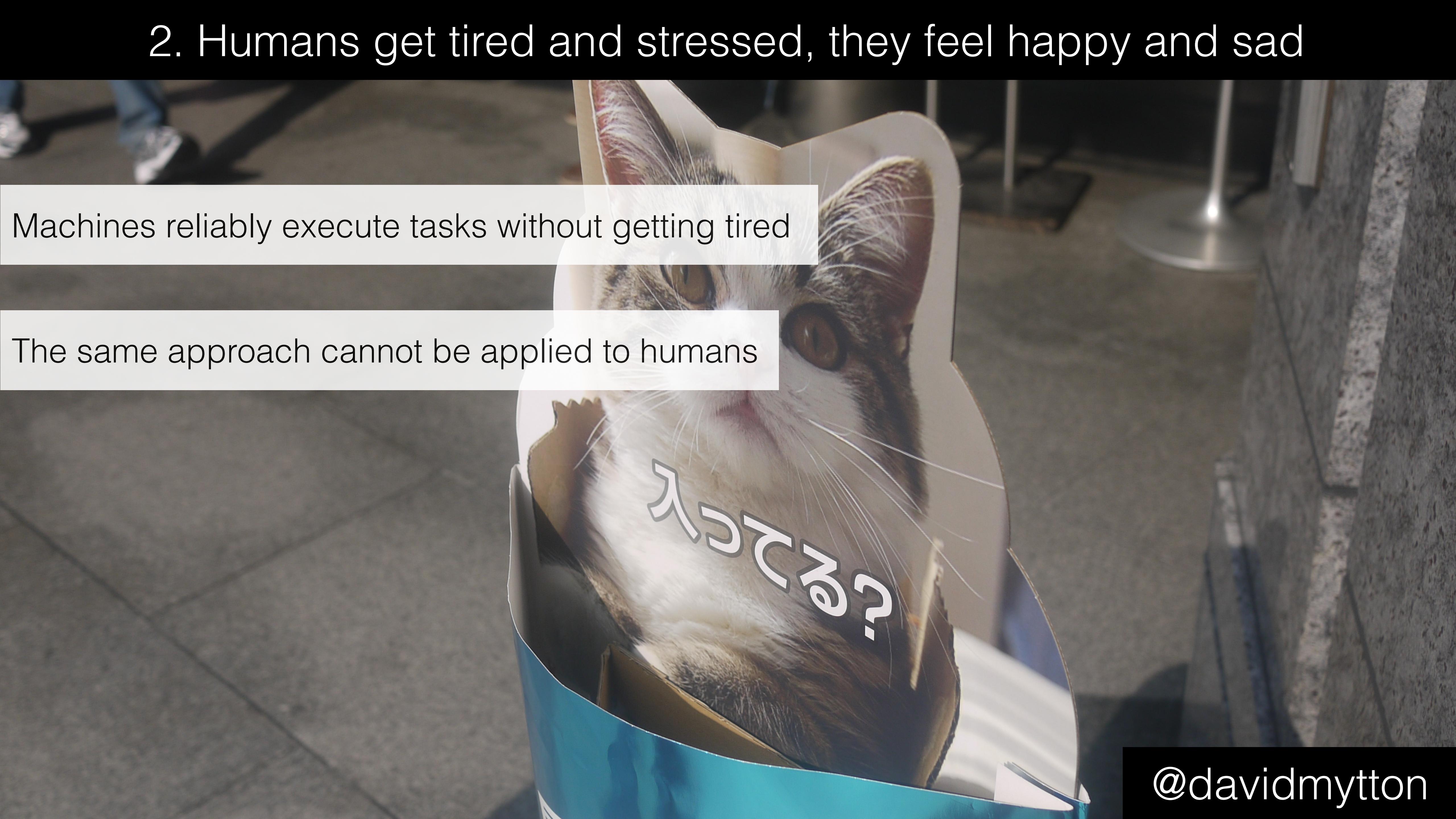


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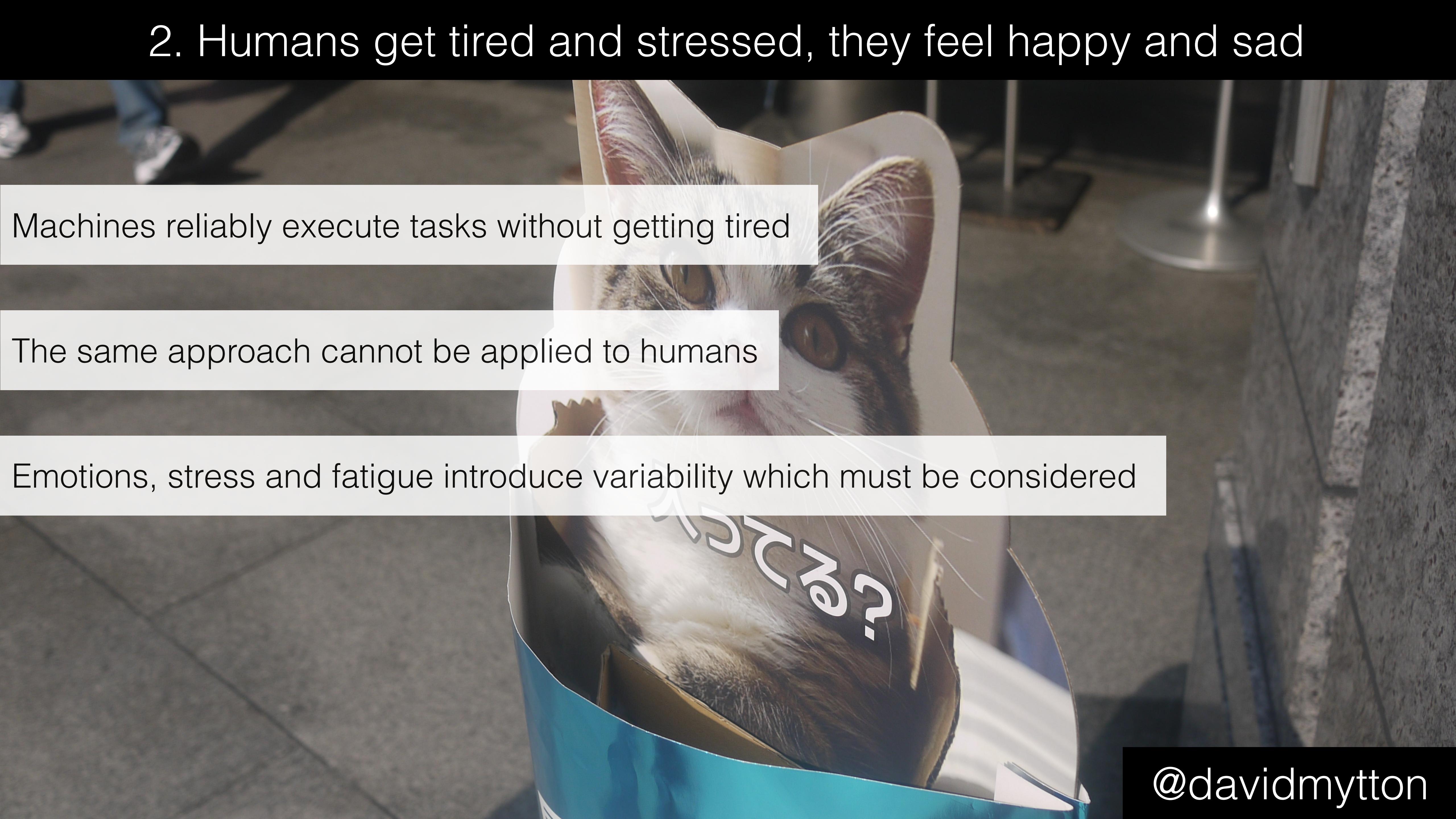
Machines reliably execute tasks without getting tired



The same approach cannot be applied to humans

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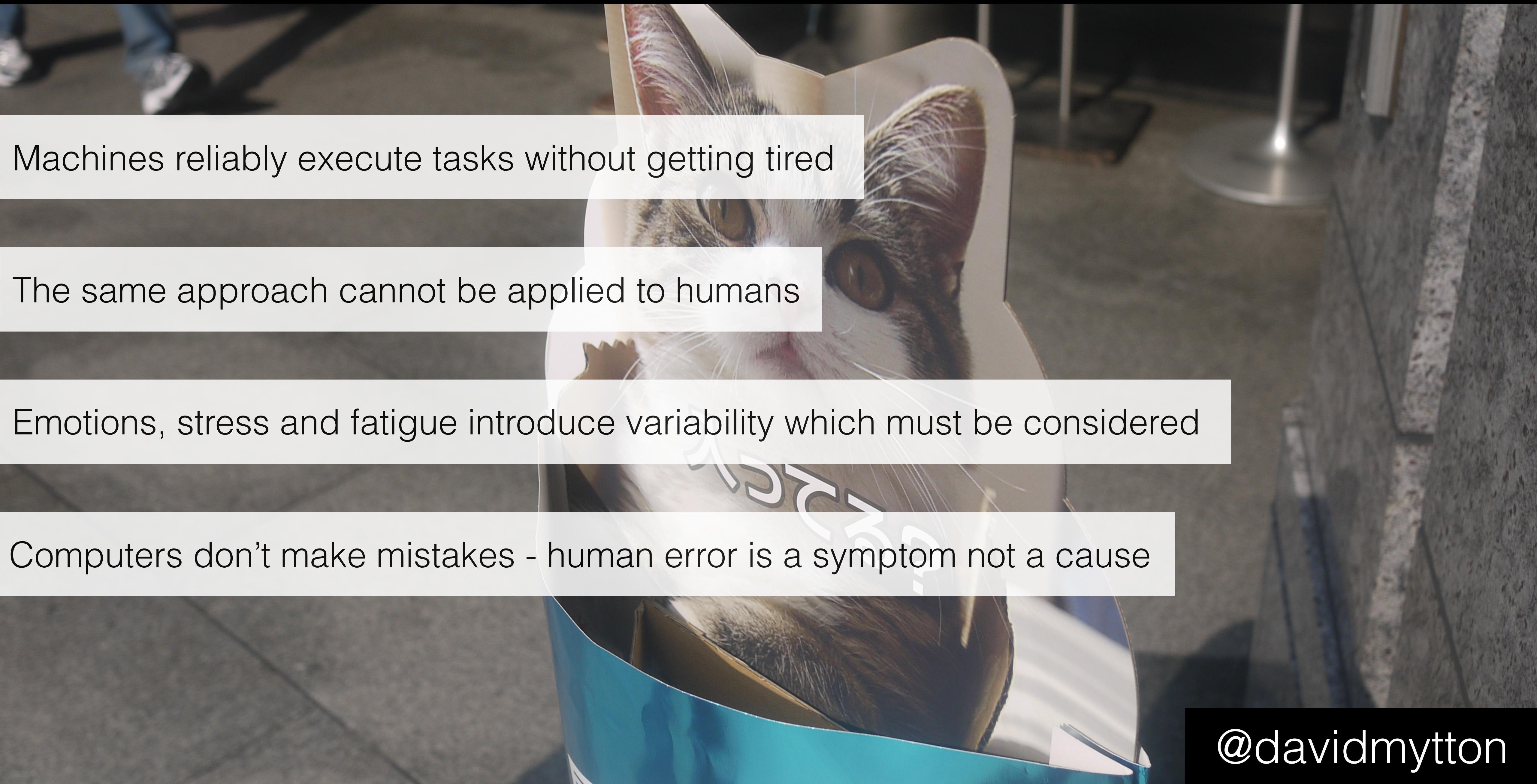


Machines reliably execute tasks without getting tired

The same approach cannot be applied to humans

Emotions, stress and fatigue introduce variability which must be considered

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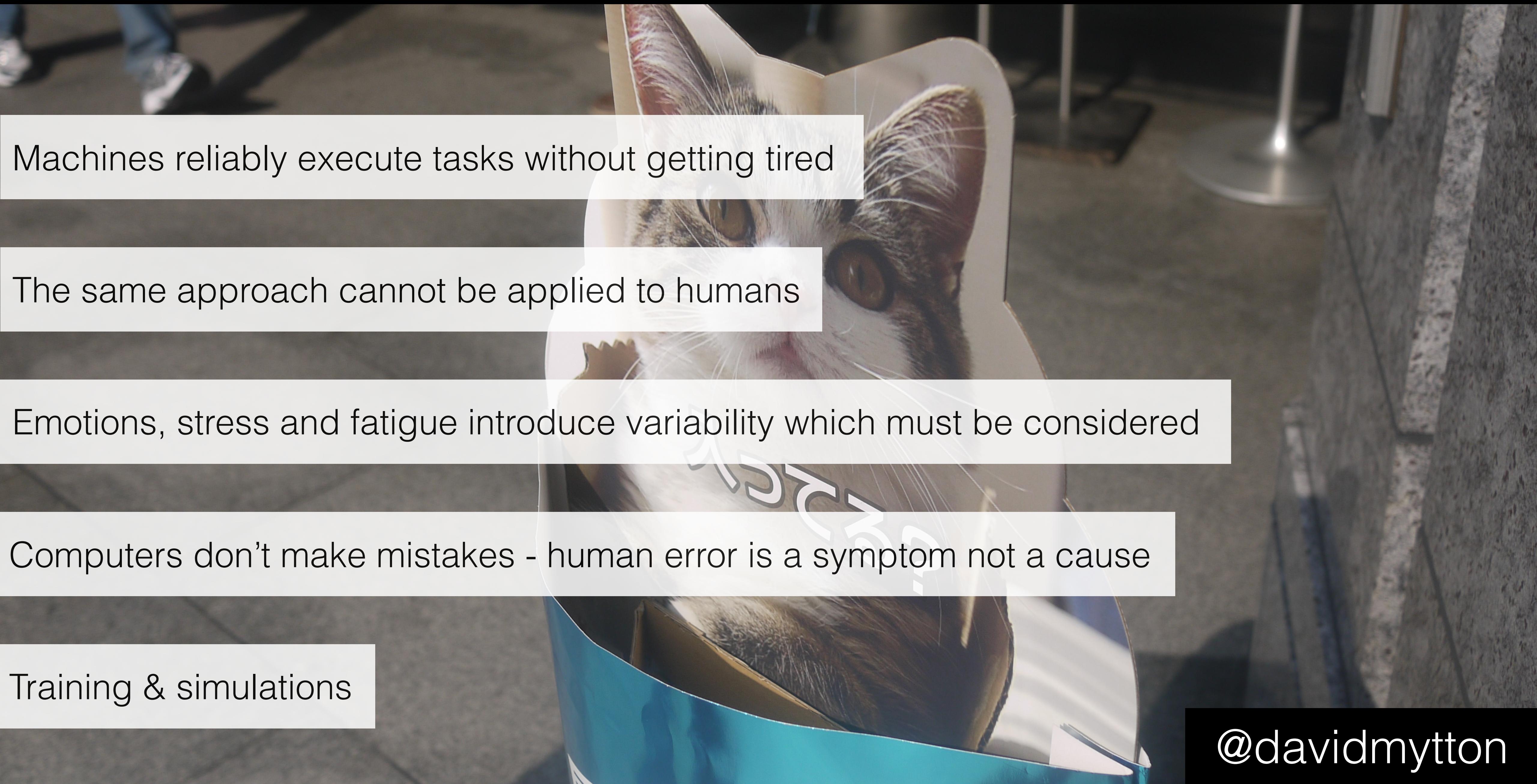
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Computers don't make mistakes - human error is a symptom not a cause

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Machines reliably execute tasks without getting tired

The same approach cannot be applied to humans

Emotions, stress and fatigue introduce variability which must be considered

Computers don't make mistakes - human error is a symptom not a cause

Training & simulations

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3. Systems don't have feelings (yet), only SLAs



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SLAs are a standard way to define expectations



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3. Systems don't have feelings (yet), only SLAs



SLAs are a standard way to define expectations

Use SLAs to determine if systems are operating normally

4. Humans need to switch off and on again



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4. Humans need to switch off and on again

Computers can run constantly for a long time



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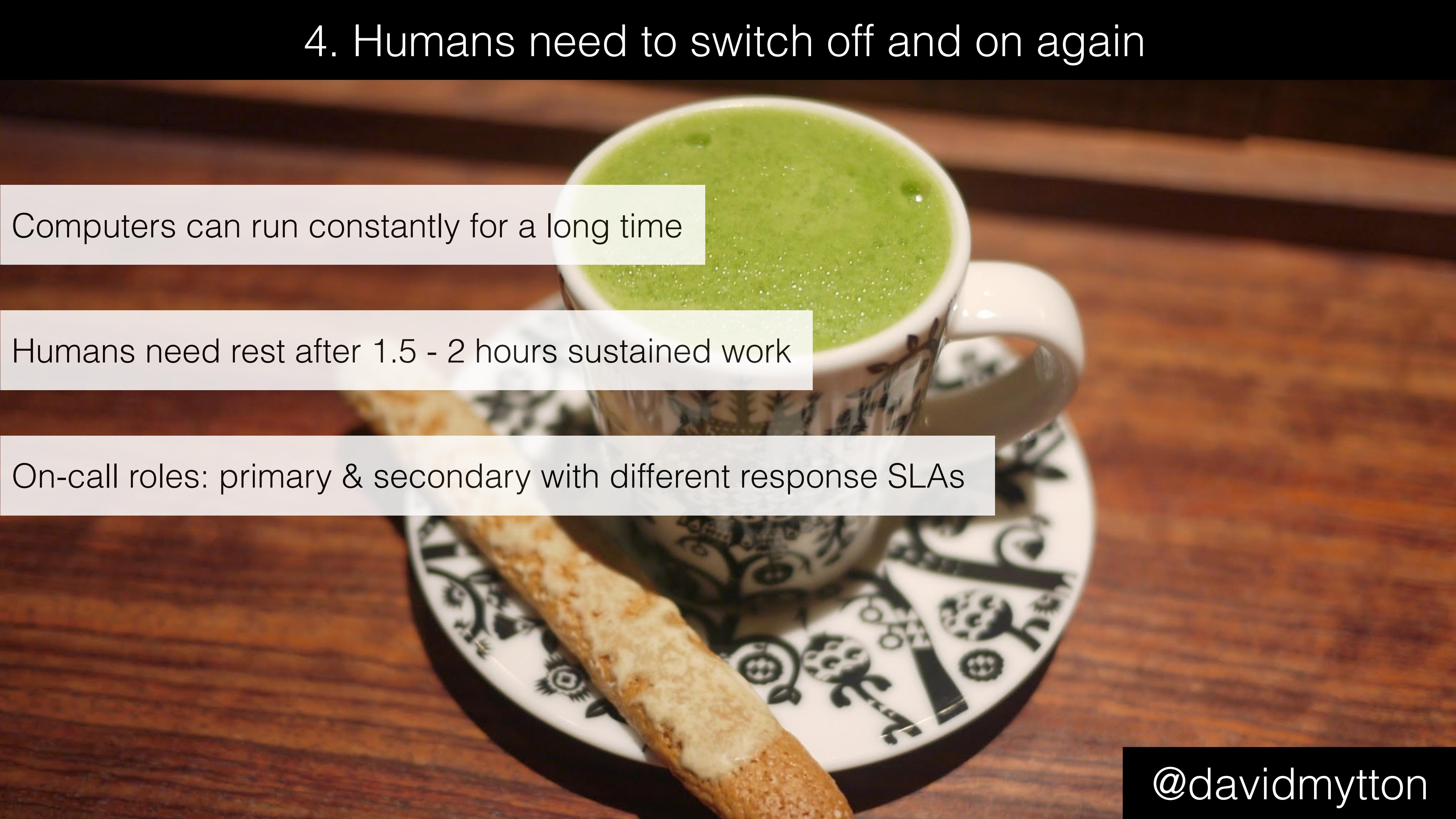
4. Humans need to switch off and on again

A photograph of a white ceramic mug filled with bright green matcha tea, resting on a matching saucer. The saucer features a black and white traditional floral or paisley pattern. A single, long, thin, light-colored pretzel is placed diagonally across the saucer. The entire arrangement sits on a dark brown wooden surface.

Computers can run constantly for a long time

Humans need rest after 1.5 - 2 hours sustained work

4. Humans need to switch off and on again

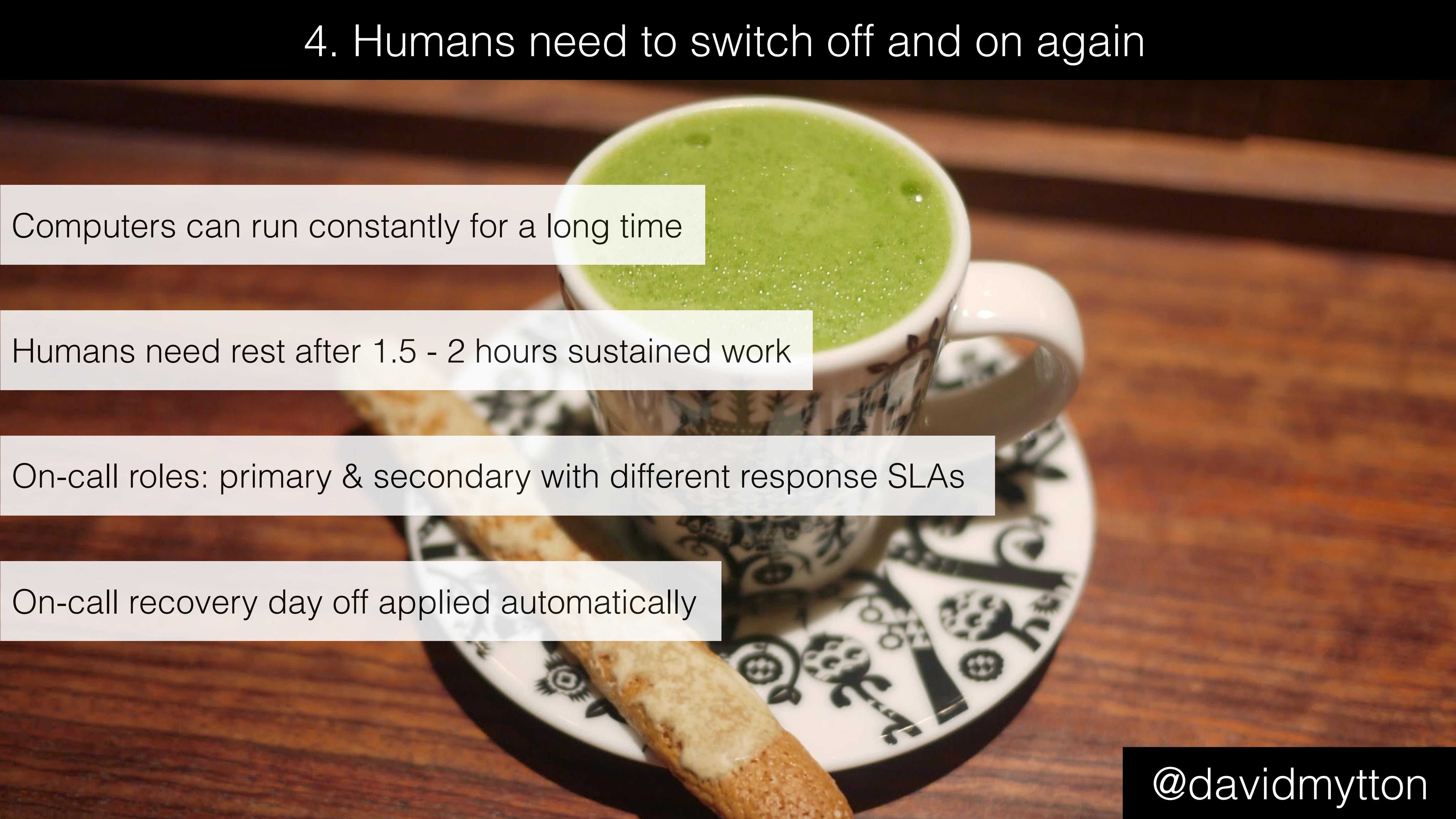


Computers can run constantly for a long time

Humans need rest after 1.5 - 2 hours sustained work

On-call roles: primary & secondary with different response SLAs

4. Humans need to switch off and on again

A close-up photograph of a white ceramic mug filled with vibrant green matcha tea. The mug has a floral pattern around its middle. It sits on a matching saucer with the same pattern. A single, long, thin pretzel stick lies horizontally across the saucer. The entire setup is placed on a dark, warm-toned wooden surface.

Computers can run constantly for a long time

Humans need rest after 1.5 - 2 hours sustained work

On-call roles: primary & secondary with different response SLAs

On-call recovery day off applied automatically

5. Wellbeing of human operators impacts the wellbeing of systems



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Time off sounds very nice, but it has real business impact



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Tired humans make mistakes



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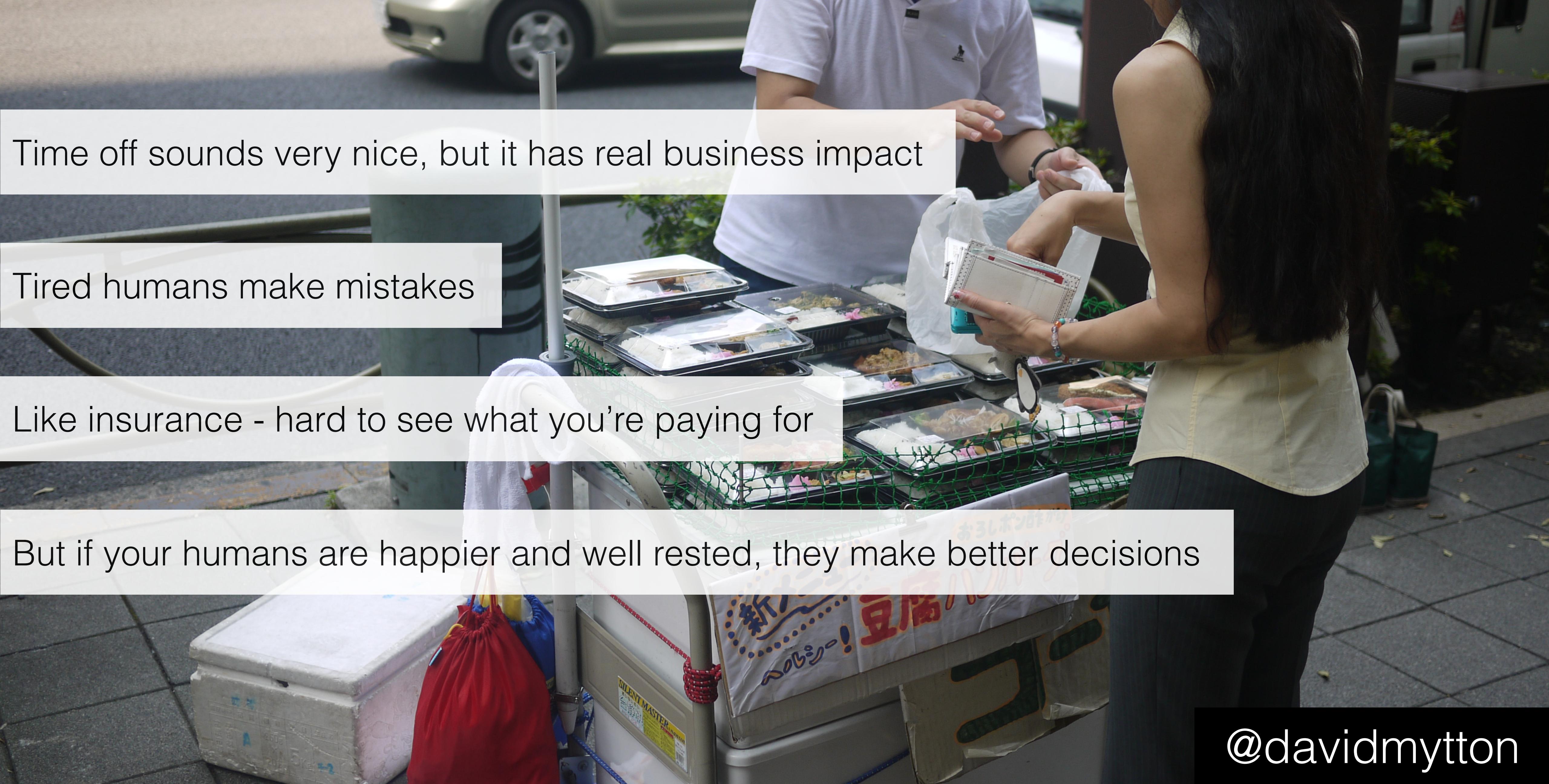
A photograph of a woman with long dark hair, seen from the side and back, standing at a food stall. She is holding a white plastic bag and a small notebook or wallet. In front of her is a metal counter displaying several trays of prepared food in clear plastic containers. A man in a white polo shirt is standing behind the counter, facing her. The background shows a paved street with a car parked on the left.

Time off sounds very nice, but it has real business impact

Tired humans make mistakes

Like insurance - hard to see what you're paying for

5. Wellbeing of human operators impacts the wellbeing of systems



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6. Alert fatigue == Human fatigue



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Too many alerts = alert fatigue



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UK Health & Safety Executive: Rule based mistake



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Too many alerts = alert fatigue

UK Health & Safety Executive: Rule based mistake

Alerts must be actionable



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7. Automate. Escalate to a human as a last resort



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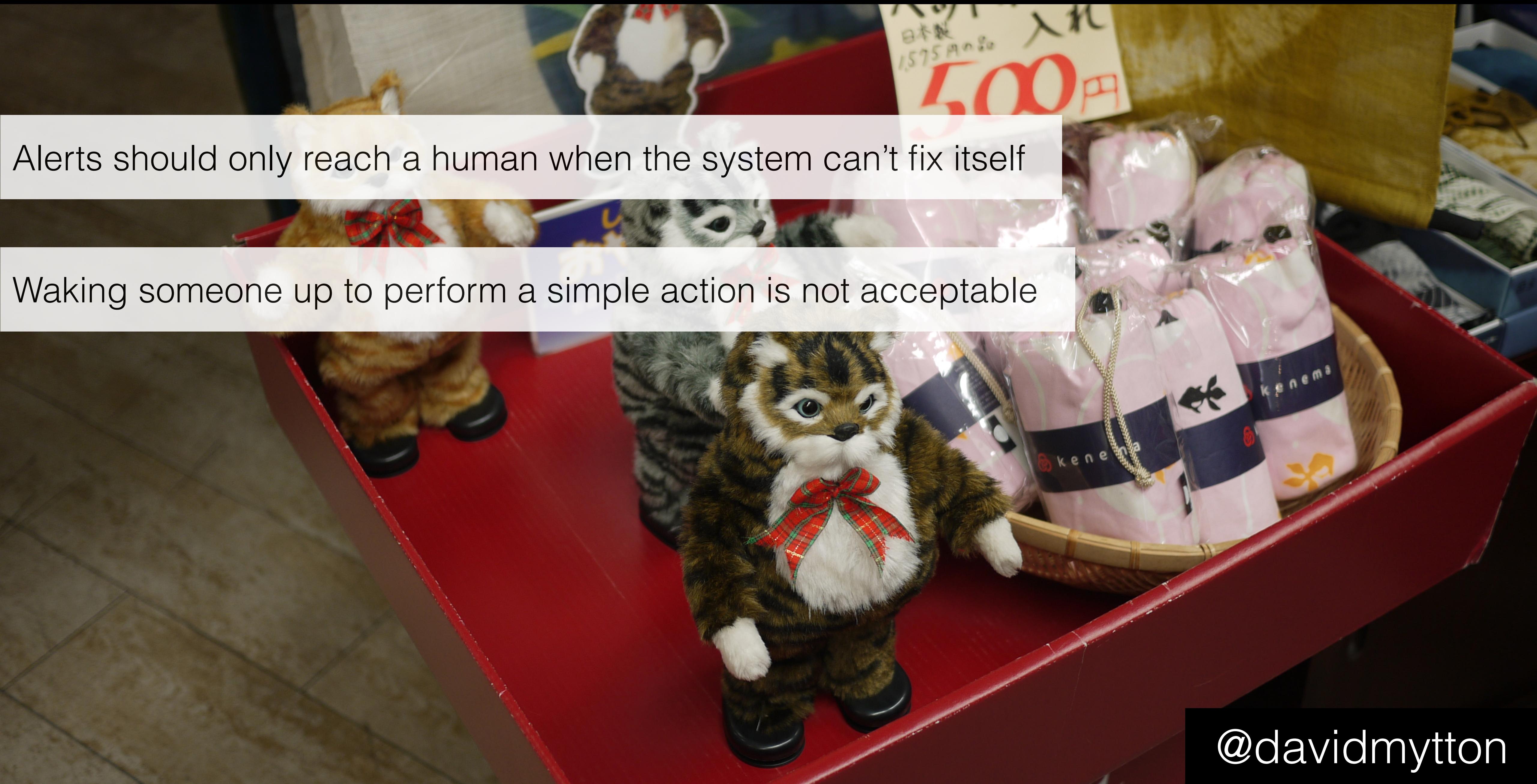
7. Automate. Escalate to a human as a last resort

Alerts should only reach a human when the system can't fix itself



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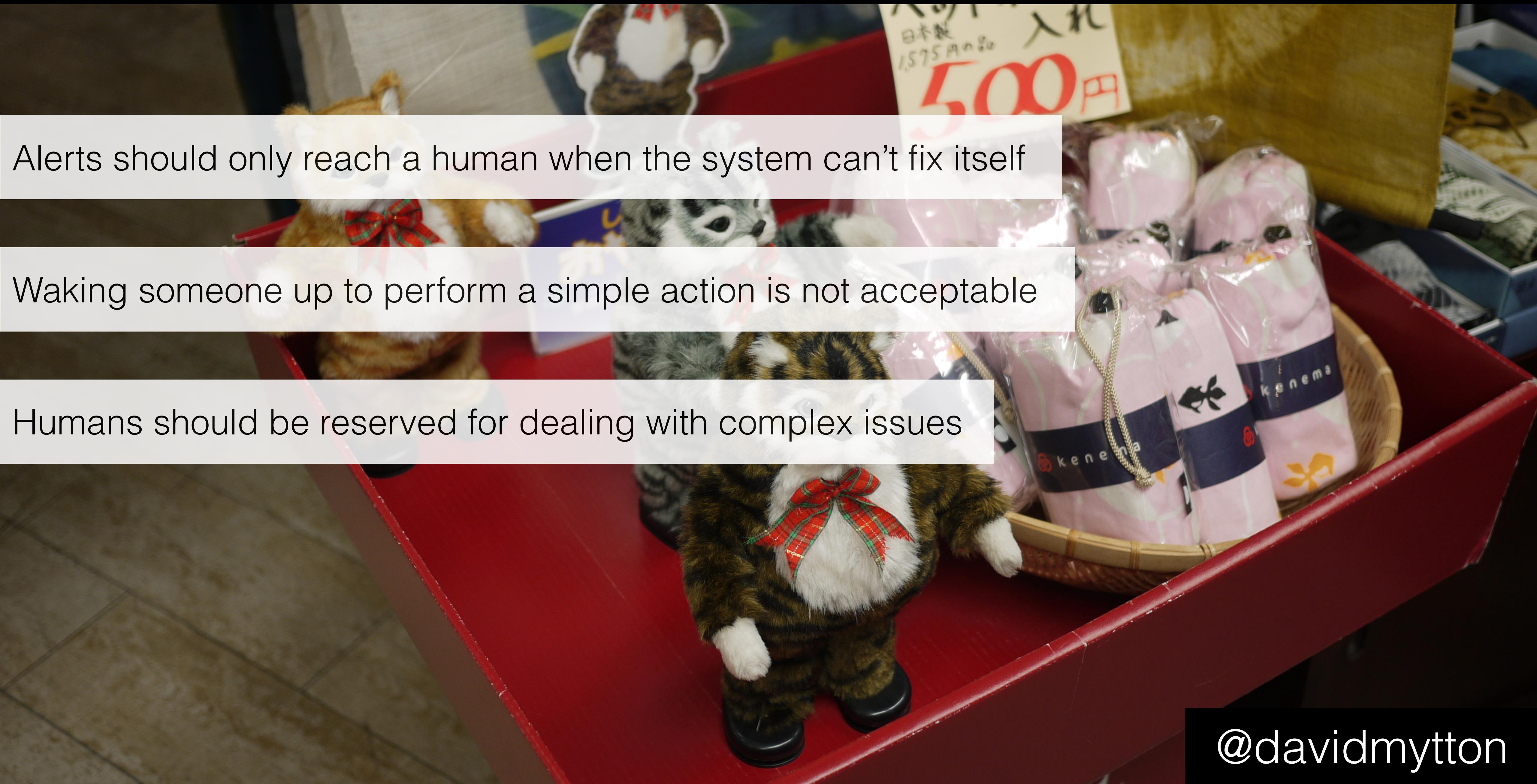


Alerts should only reach a human when the system can't fix itself

Waking someone up to perform a simple action is not acceptable

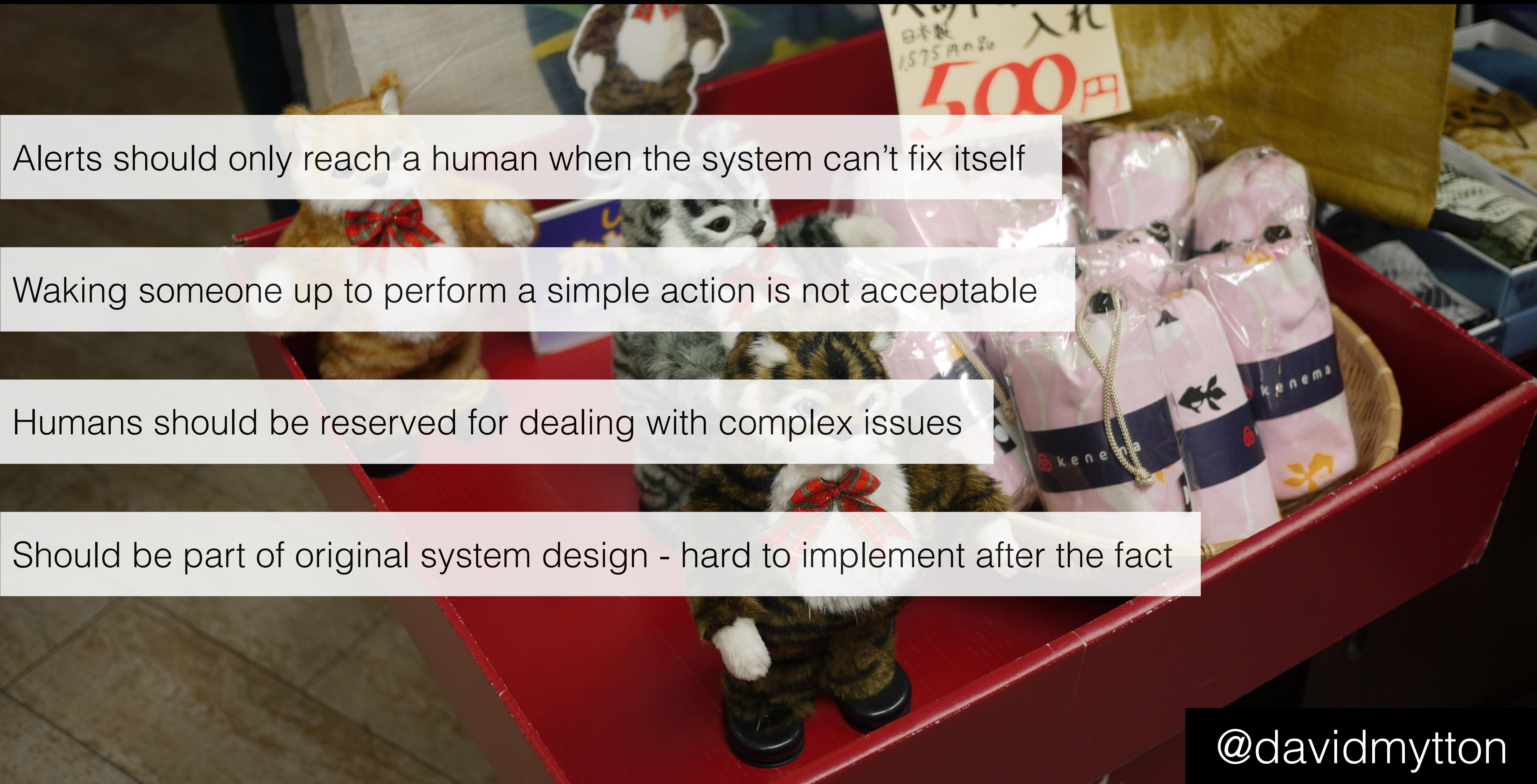
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8. Document everything. Train everyone



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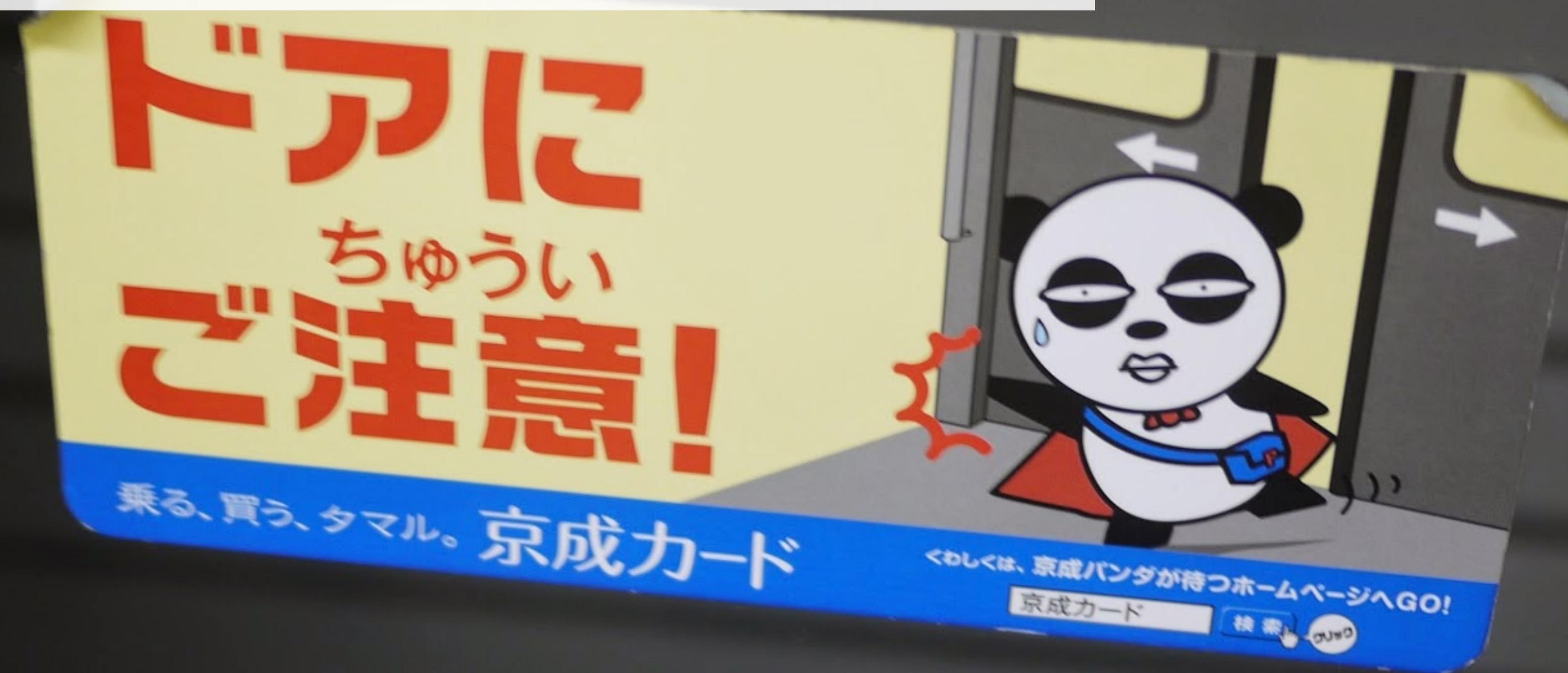
9. Kill the shame game



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9. Kill the shame game

Nobody is perfect. Everyone breaks production at least once!

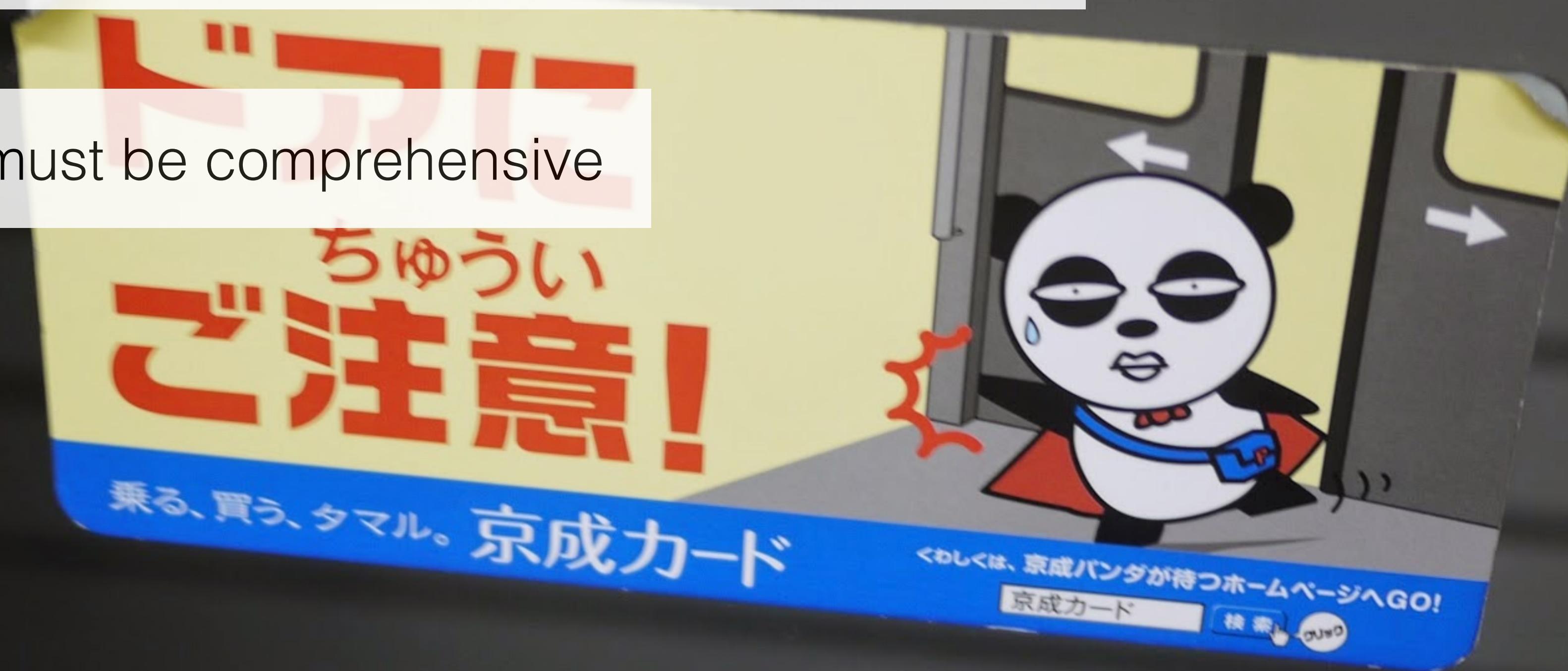


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Nobody is perfect. Everyone breaks production at least once!

Root cause analysis must be comprehensive



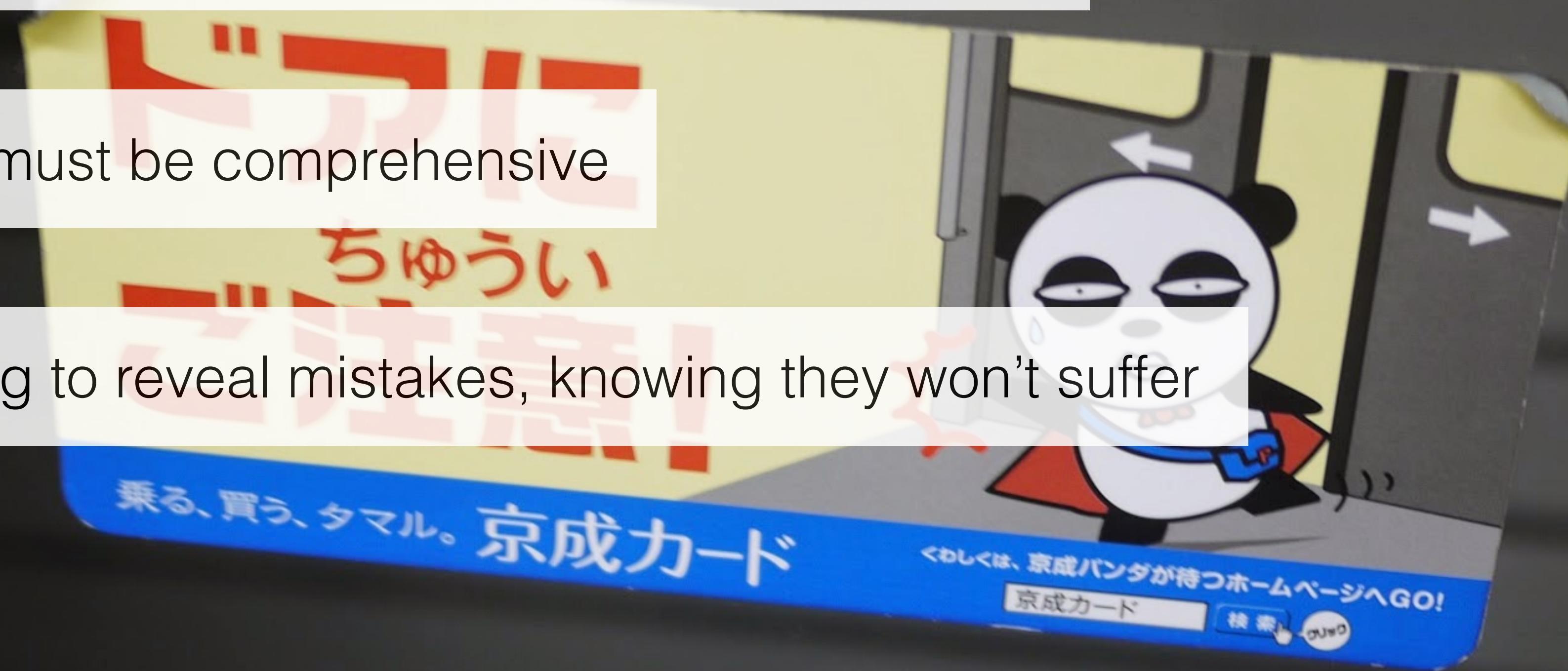
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People must be willing to reveal mistakes, knowing they won't suffer



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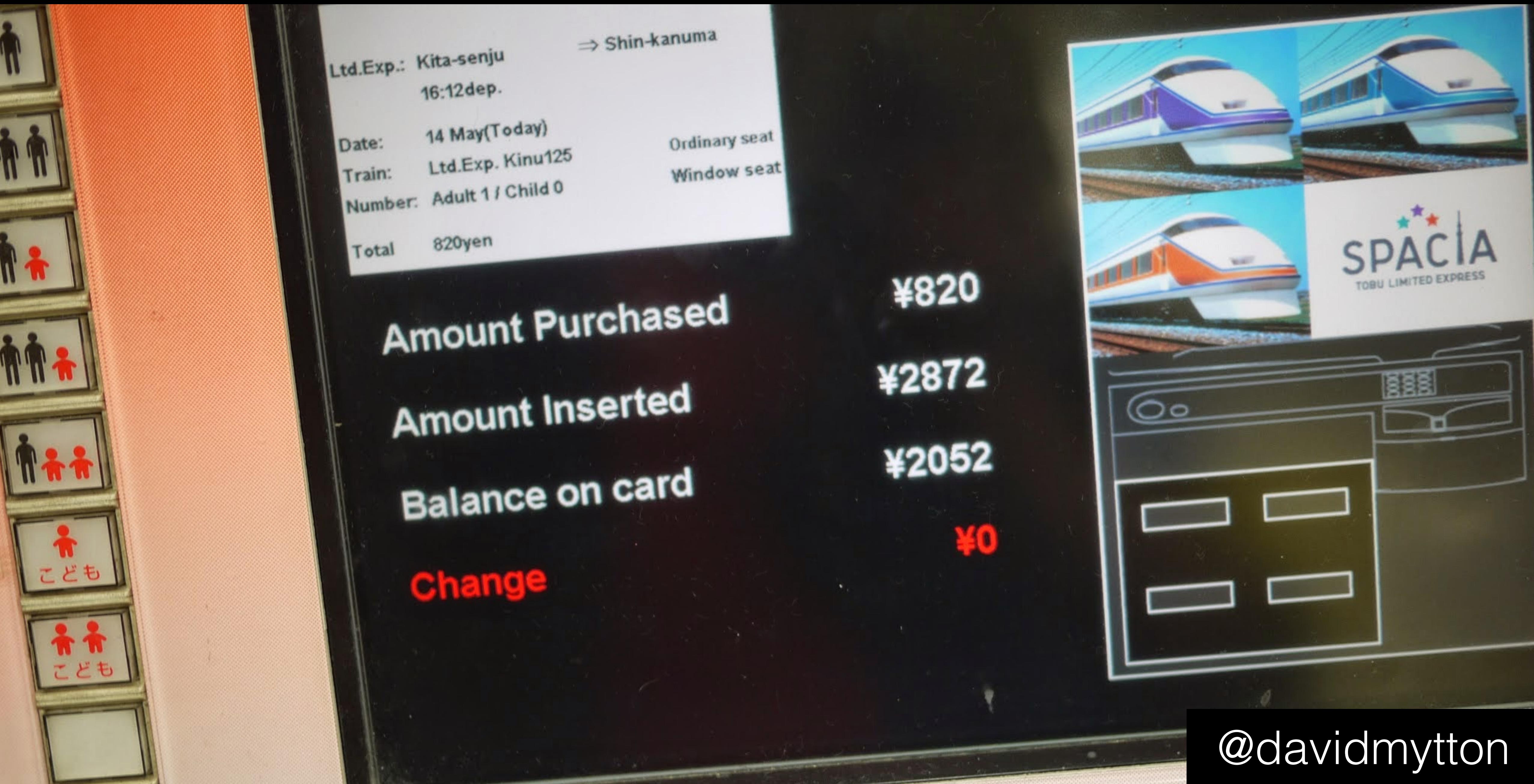
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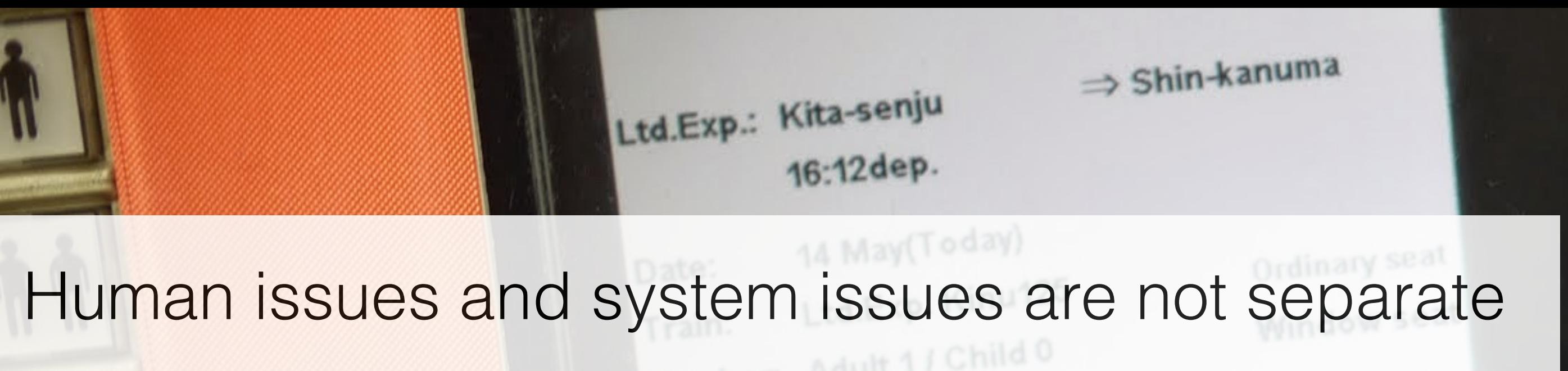
Blameless post-mortems mean revealing system failures through human actions

10. Human issues are system issues



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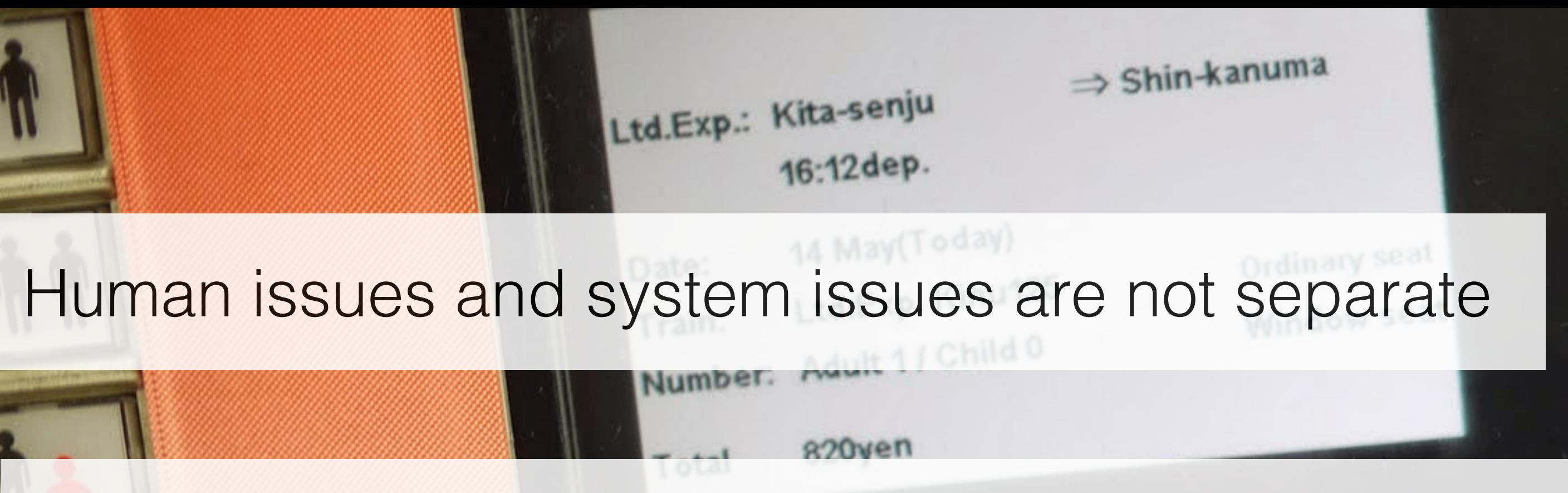


Human issues and system issues are not separate

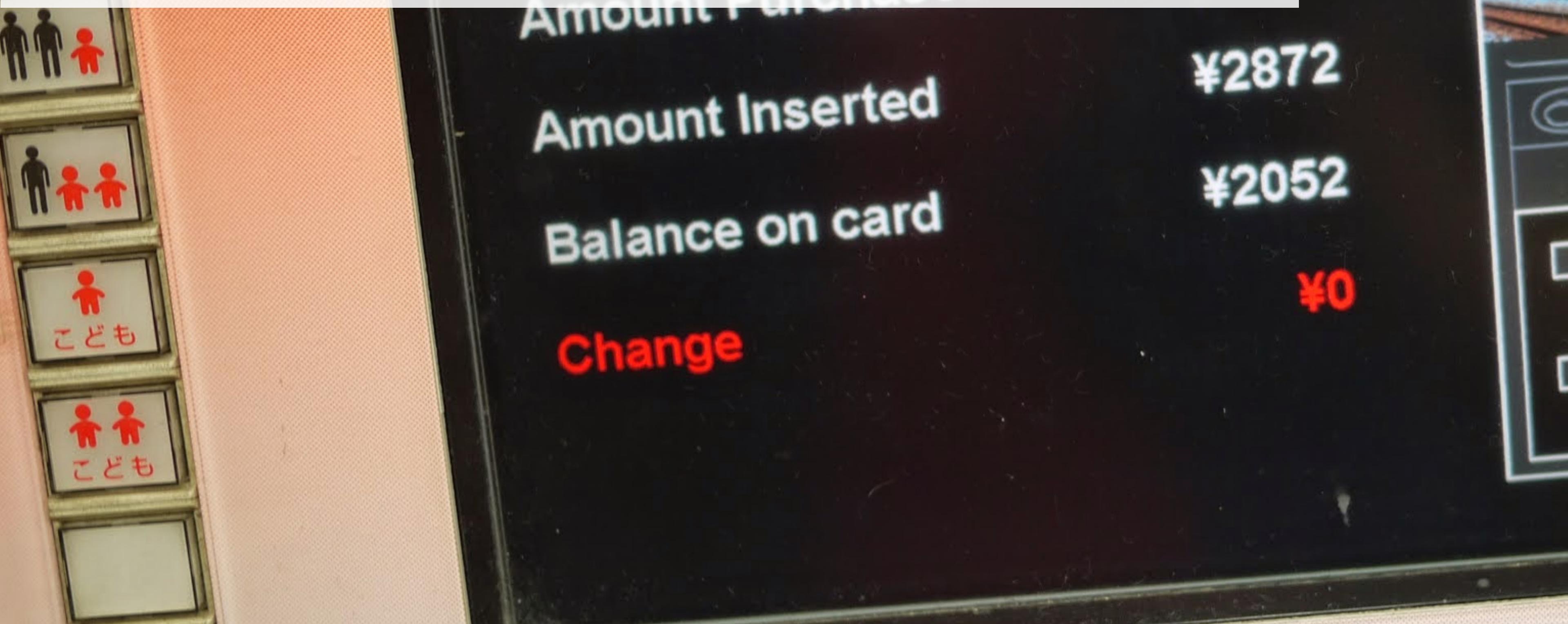


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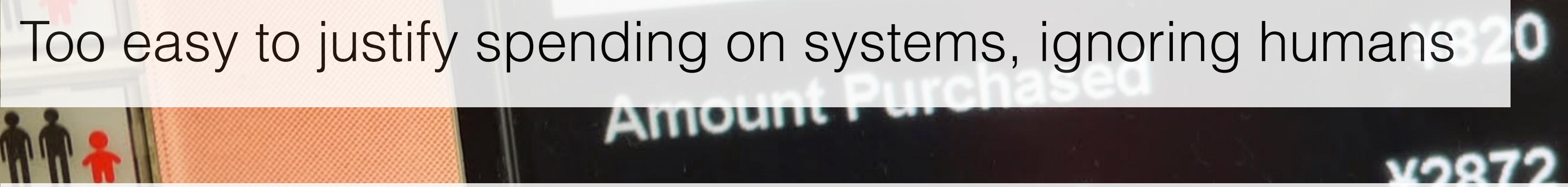
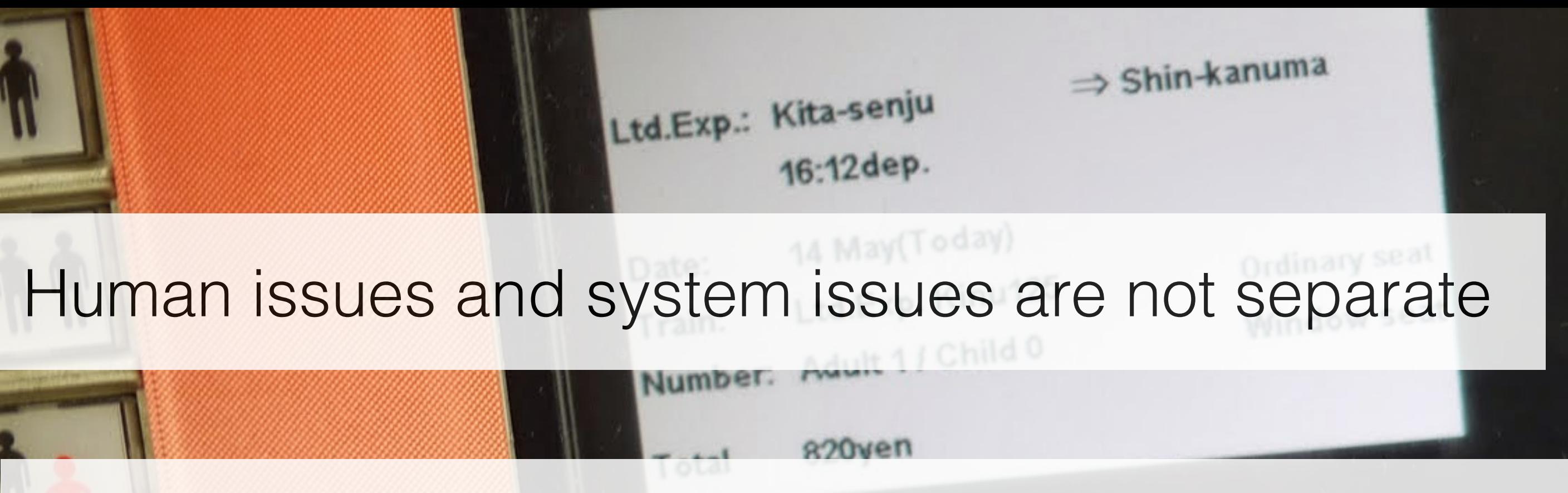


Too easy to justify spending on systems, ignoring humans

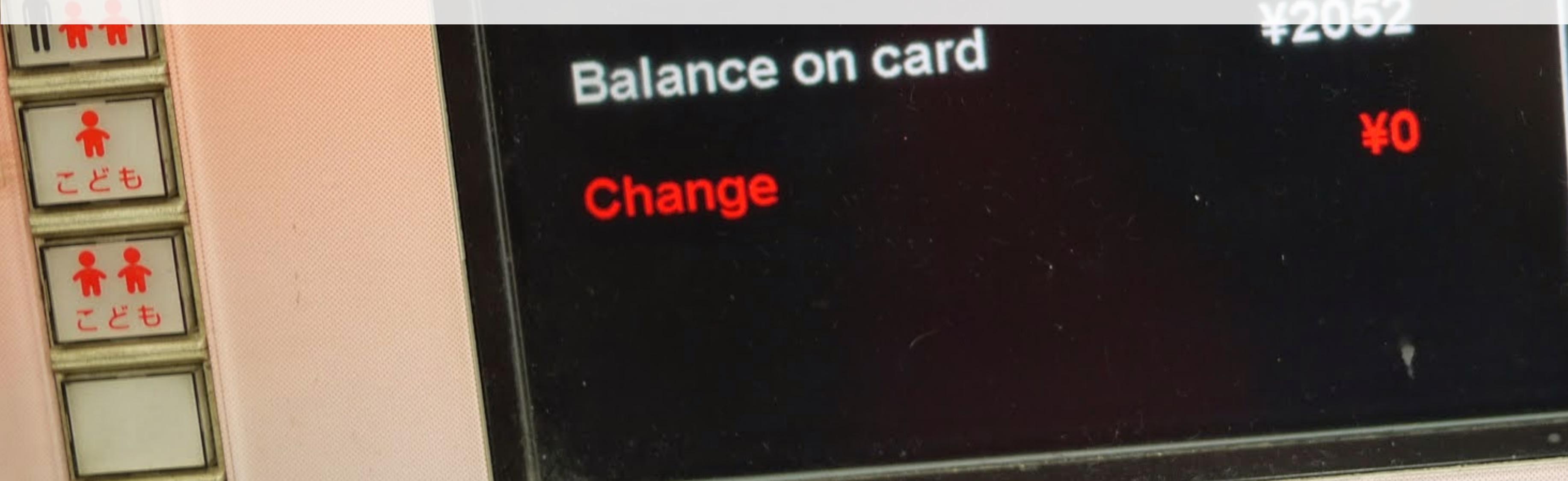


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Example: Prioritising development tasks based on out of hours alerts



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11. Human health impacts business health



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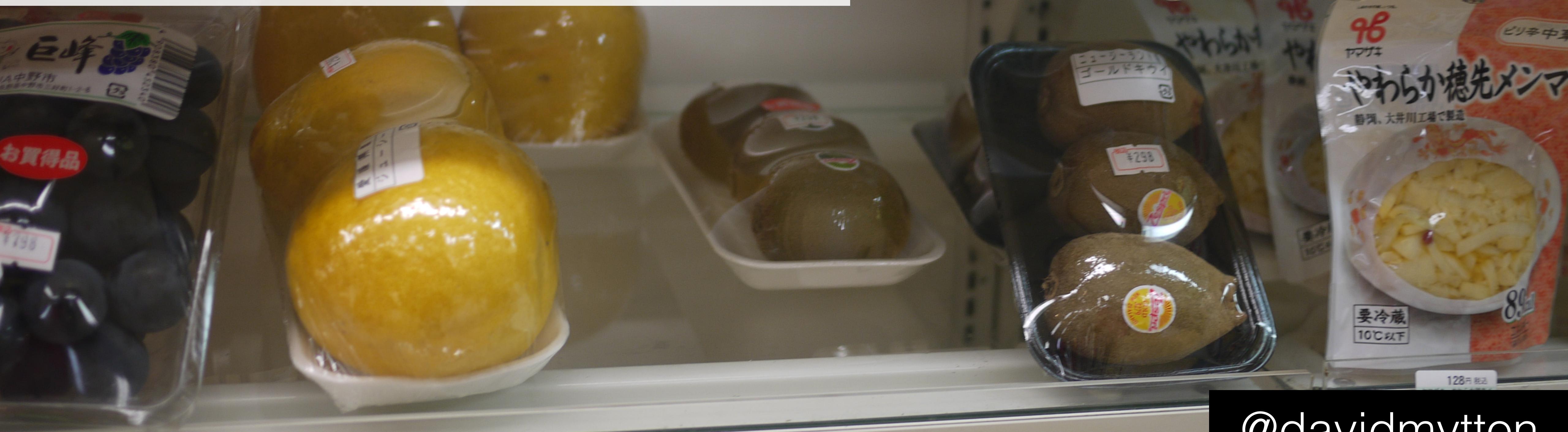
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11. Human health impacts business health



Human health is directly related to business health

How long could your business run without people?



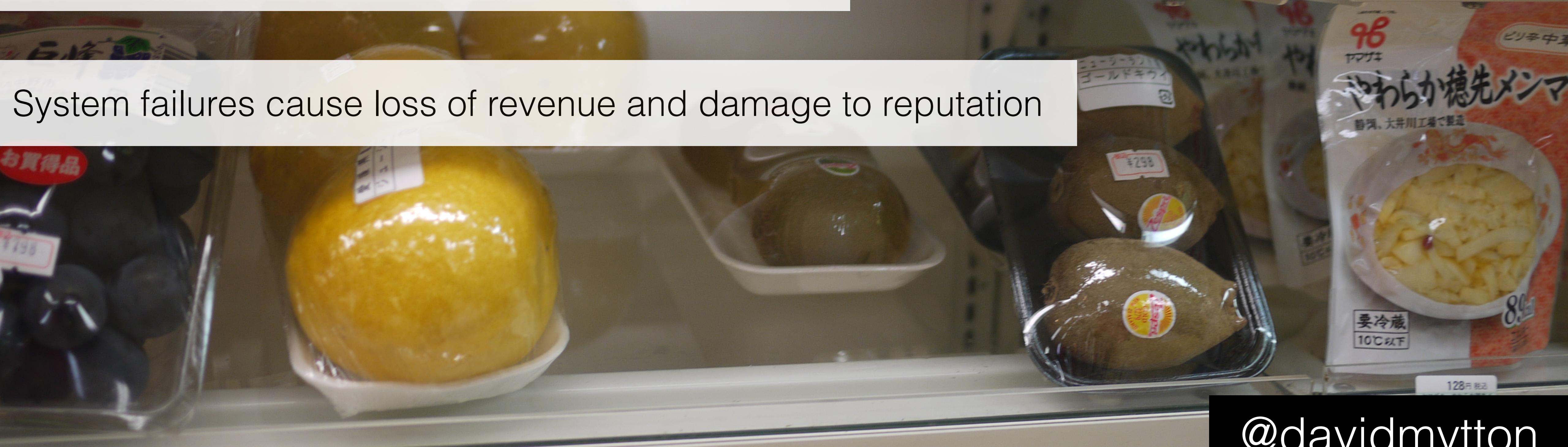
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System failures cause loss of revenue and damage to reputation

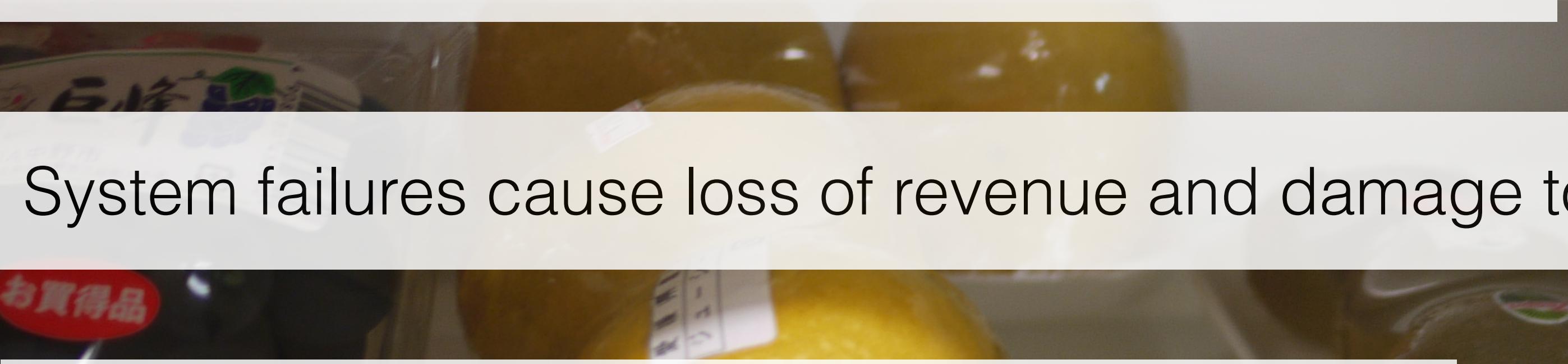
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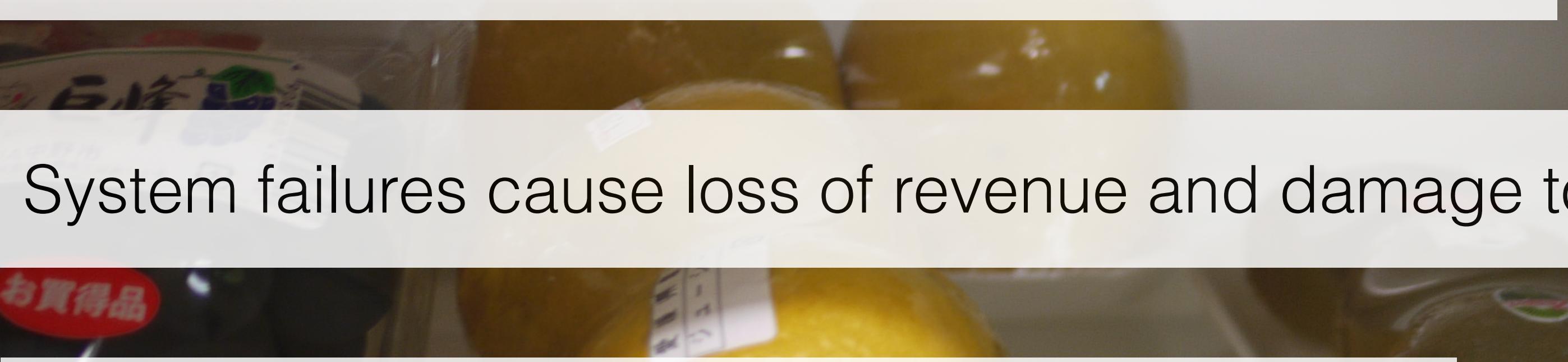
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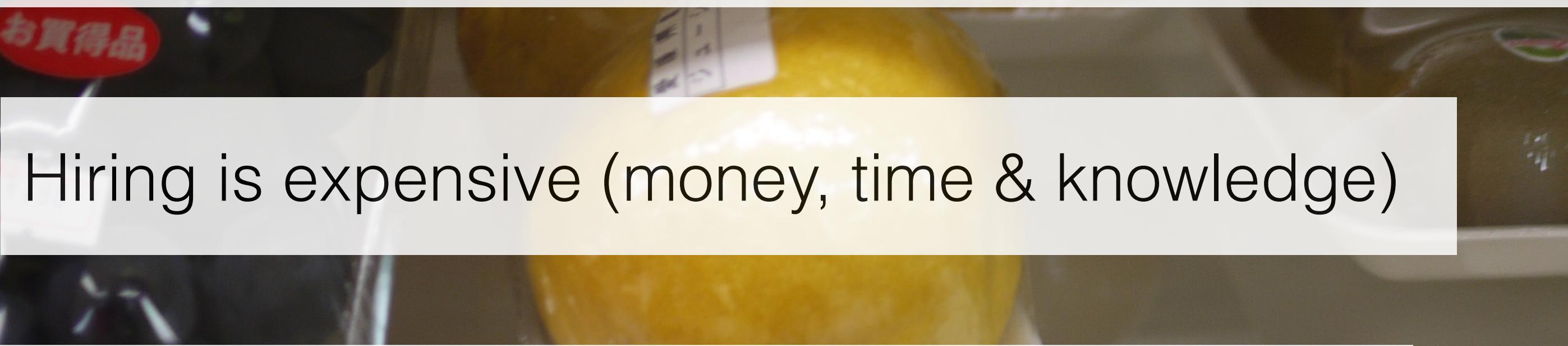


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Hiring is expensive (money, time & knowledge)

Looking after your team is just good business



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12. Humans > systems



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12. Humans > systems



Humans & systems are the same in terms of level of impact

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12. Humans > systems



Humans & systems are the same in terms of level of impact

But why do we run businesses?

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12. Humans > systems



Humans & systems are the same in terms of level of impact

But why do we run businesses?

... to provide a service to others...

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12. Humans > systems



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12. Humans > systems



Humans & systems are the same in terms of level of impact

But why do we run businesses?

... to provide a service to others...

... to earn a living...

... to enjoy a lifestyle...

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12. Humans > systems



Improving life for your team is easy to justify - hiring & retaining

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12. Humans > systems



Improving life for your team is easy to justify - hiring & retaining

Poor working environment, being woken up, blame...

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Improving life for your team is easy to justify - hiring & retaining

Poor working environment, being woken up, blame...

...increasing stress, health impacts, illness...

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Improving life for your team is easy to justify - hiring & retaining

Poor working environment, being woken up, blame...

...increasing stress, health impacts, illness...

Many organisations unintentionally impact health

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12. Humans > systems



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HumanOps

www.humanops.com

ありがとうございます

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