



ESSENTIAL MAINTENANCE WORK IN PROGRESS

Why the new digital government
needs to be about old things

Ellen Broad
October 2019



Image 2407: Duncraig 2008, (State Library of Western Australia)

THREE QUESTIONS

1. What is maintenance worth to you

“We often fail to appreciate the value of
maintenance at the expense of
innovation”

Freakonomics,
‘in praise of maintenance’(Ep 263)

“People always think more about how new ground can be broken than they think about how existing institutions can be sustained or existing facilities can be maintained. It leads to a constant trap where we underinvest in old things, then old things disappoint, us then we feel a need for new things, then to satisfy that need for new things we under-invest more in old things and the cycle goes on.”

Larry Summers

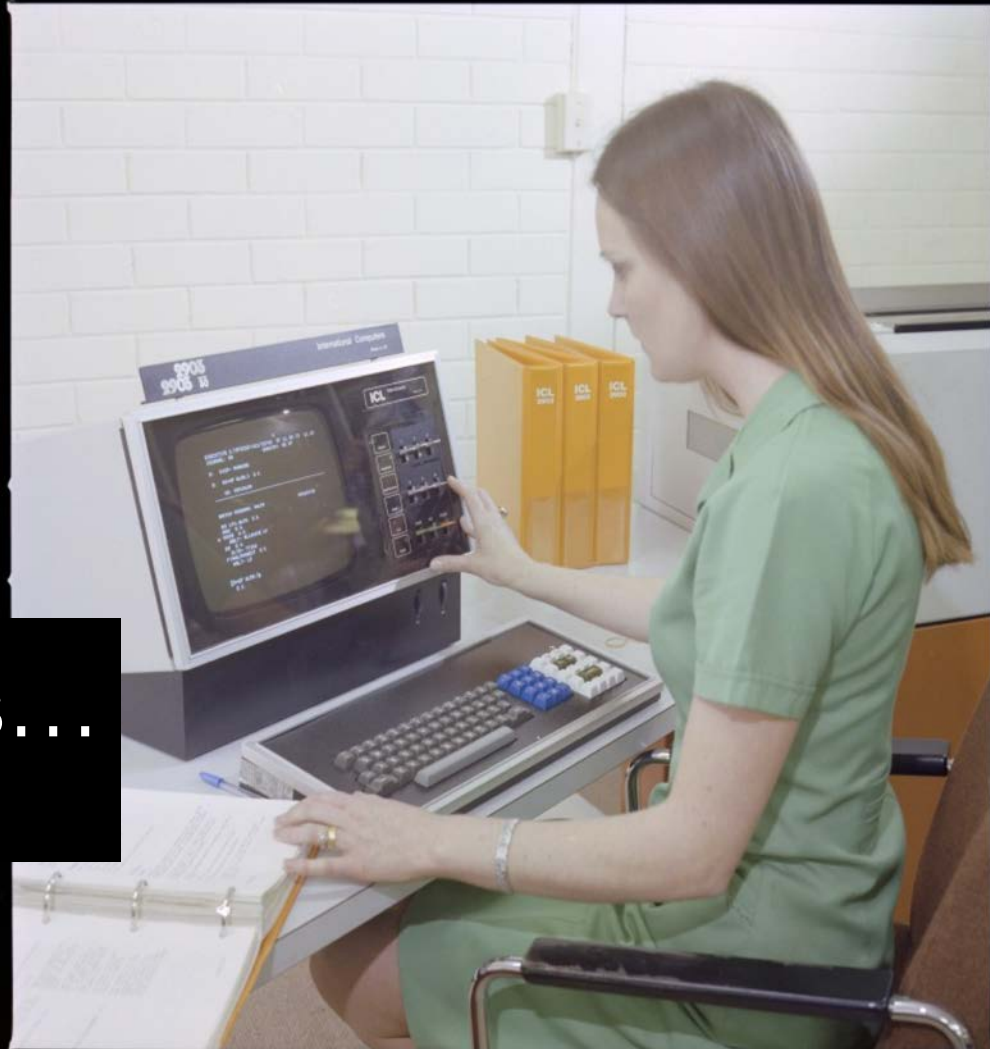


As computing has moved from this...

State Library of Western Australia: 332121 PD: Delivery of an NCR Century Series computer at Chamberlain Industries, Perth, 1969

State Library of Western Australia

To this...

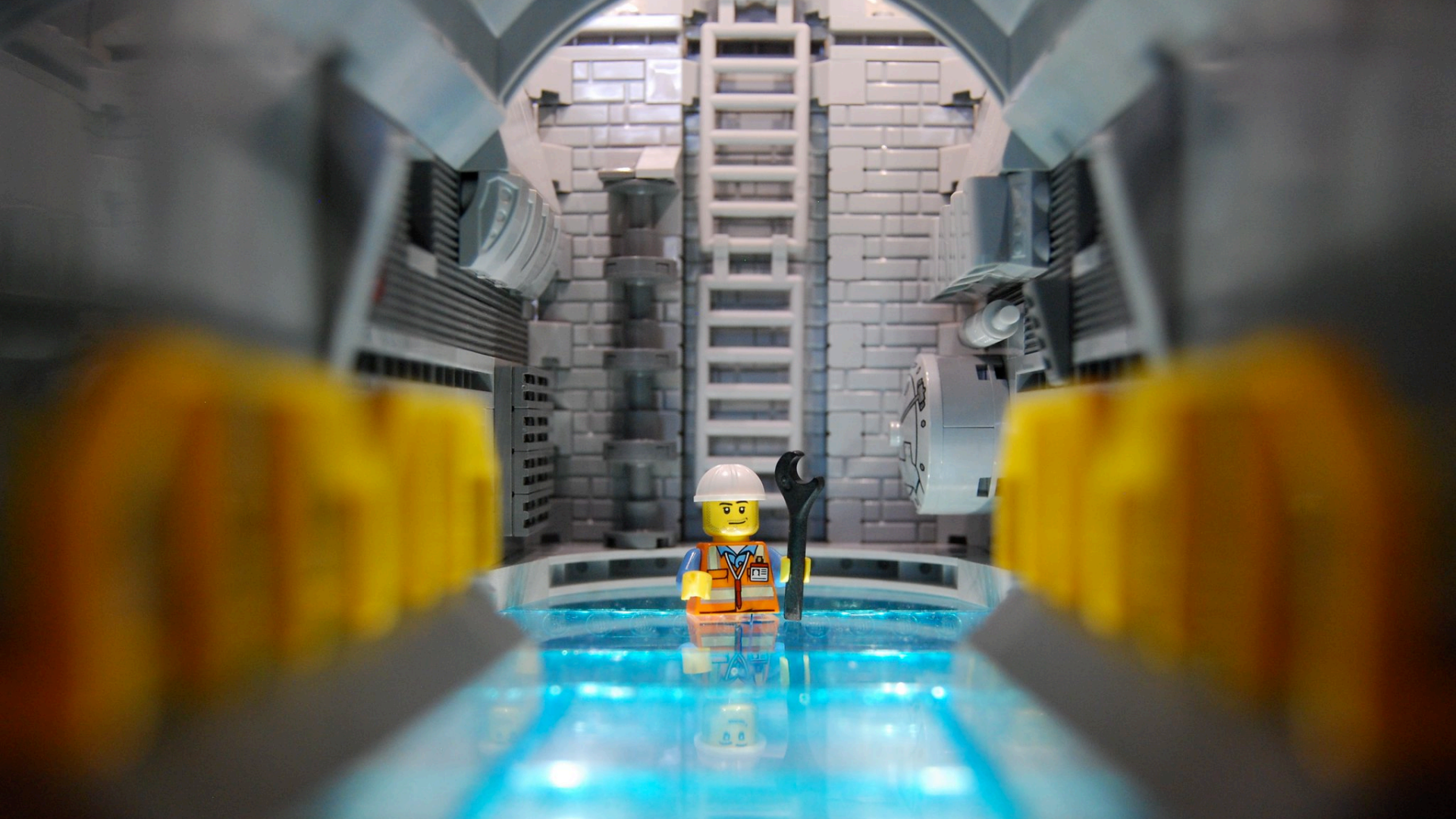


State Library of Western Australia: 332121PD: Deliver Series computer at Chamberlain Industries, Perth, 19

To this...



Ibmphoto24, 'Rio Operations Centre (Rio de Janeiro)





“The hardest part of being a developer isn’t the code, it’s learning the entire internet is put together with peanut butter and goblins.”

Sarah Drasner

When something appears effortless,
convincing people that
maintaining that appearance
costs money
is hard

We have built an industry
that undervalues maintenance

As a result,
maintenance is **expensive**



...but new things can be
even more expensive

THREE QUESTIONS

1. What is maintenance worth to you
2. What is a digital government system that is “built to last”?

“Technology creates little value on its own:
it must be thoughtfully embedded within
municipal governance structures”
Ben Green, the Smart Enough City

Calvary Public Hospital Bruce

[\(02\) 6201 6111](tel:(02)62016111) [Cnr Belconnen Way Haydon Drive, Bruce, ACT](#)

11

Number of Patients Waiting
to commence Treatment

01:32

Average time waited for
treatment (hh:mm)
(non-critical patients treated in the last
2 hours)

Last updated: 15 Oct 2019 22:36:21

Canberra Hospital

[\(02\) 5124 0000](tel:(02)51240000) [Yamba Drive, Garran, ACT](#)

38

Number of Patients Waiting
to commence Treatment

02:57

Average time waited for
treatment (hh:mm)
(non-critical patients treated in the last
2 hours)

Last updated: 15 Oct 2019 22:36:11

Grote Street

Scheduled for this stop

Bus services	Frequency
99A City Loop	15 min
721E Noarlunga	15 min
729 Old Reynella	15 min
722E Noarlunga	15 min
91A City & North Adelaide Loop	15 min
721E Noarlunga	15 min
719 Flinders University	15 min
7721 Noarlunga	15 min
99A City Loop	15 min

Buses from this stop

98A City & North Adelaide Loop	7721 Noarlunga
99A City Loop	721E Noarlunga
719 Flinders University	722E Noarlunga
720 Old Reynella	729 Old Reynella
721E Noarlunga	721E Noarlunga
721E Noarlunga	721E Noarlunga
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721E Noarlunga	721E Noarlunga
721E Noarlunga	721E Noarlunga



Built to last doesn't mean...

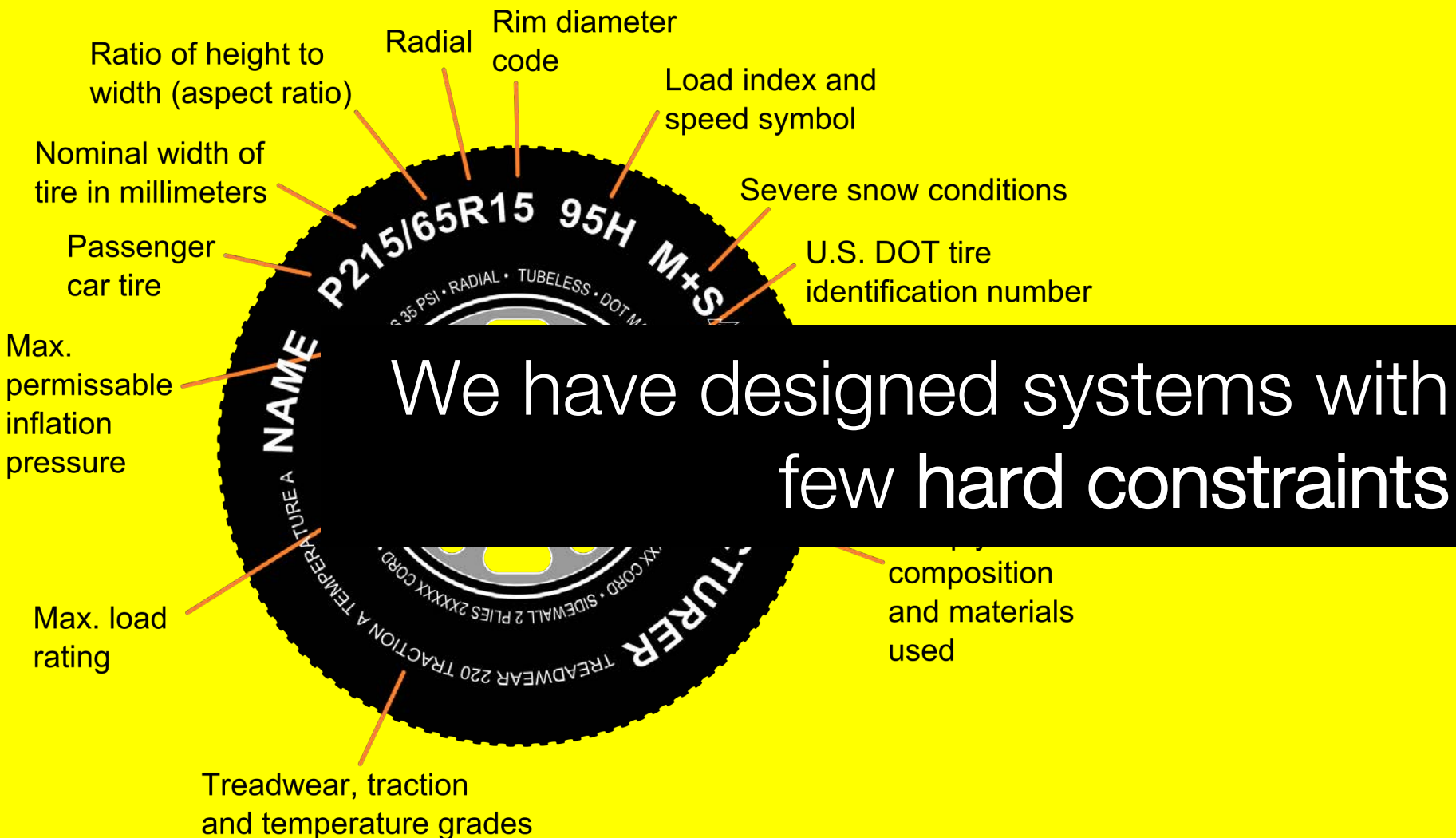
stays the same forever



Marino Gonzalez, Archives (CC-BY-NC-ND, Flickr)

It means...

easy to upgrade
cheap to replace
simple to maintain



Ratio of height to width (aspect ratio)

Radial
Rim diameter code

Load index and speed symbol

Nominal width of tire in millimeters

Severe snow conditions

Passenger car tire

U.S. DOT tire identification number

Max. permissible inflation pressure

Max. load rating

Treadwear, traction and temperature grades

composition and materials used

We have designed systems with few hard constraints



Marco Verch, Socket on the Wall (CC BY 2.0, Flickr)

The next twenty five years...

standards

indicators

external assurance

Building systems that last
means making maintenance valued

Building cheaper systems
means making maintenance valued

Building **better** systems

means making maintenance valued

THREE QUESTIONS

1. What is maintenance worth to you
2. What is a digital government service that is “built to last”?
3. How would we trust it?

STOP

WATCHING

ALL OF US



A photograph of a person at a protest. The person is wearing a blue knit beanie, glasses, and a light-colored jacket. They are holding a large black sign with the word "STOP" written in white, pixelated capital letters. In the background, other protesters are visible, some holding signs. One sign in the background has text that is partially legible: "to violated, and no...", "trust, but upon... probably comes...", "supported by faith in... efficiency...", and "and particularly... depending...", "placed to be... searched, and...", "... to be...".

STOP

Trust is the foundation of society. Where there is no truth, there can be no trust, and where there is no trust, there can be no society. Where there is society, there is trust, and where there is trust, there is something upon which it is supported.

Frederick Douglass, 'Our Composite Nationality', 1869

Designing systems with
citizen consent and trust

**Sidewalk Labs is
reimagining cities to
improve quality of life.**



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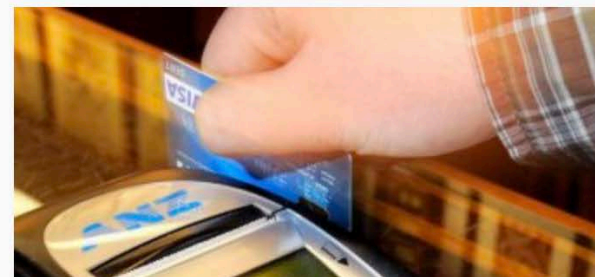
ATO phone scammers turn up at Adelaide man's house dressed as police with eftpos machine

By [Eugene Boisvert](#) and Richard Davies

Updated about 2 hours ago

SA Police say two men turned up to another man's house with an eftpos machine demanding money after earlier calling him pretending to be from the Australian Taxation Office (ATO).

Police say yesterday the Salisbury Downs victim received an automated phone message telling him he had a tax debt and that a warrant had been



With low trust societies comes
low trust systems

the words "Federal Police" on them.

The man, who did not want to be named, told the ABC the pair identified themselves as Australian Federal Police (AFP) from an Adelaide branch.

RELATED STORY: ['ATO scams' rose 900 per cent in 2018, as scammers took Aussies for nearly \\$500m](#)

RELATED STORY: [ATO scam threatening Australians with 'a warrant for arrest' is back](#)

Building trusted systems

transparency

accountability

cause and effect

Building trust in government

transparency

accountability

cause and effect

This is still a young industry



This is still a young industry

State Library of WA, BA2817/924: Computer operators Kathy Kennedy and Colin Disley at the control console in the new computer room at Hamersley House, Perth, 1981

But it is time to grow up.

But it is time to grow up.
standards
indicators
external assurance
transparency
accountability
cause and effect

You are the:
architects
legislators
auditors
educators
arbiters
customers

What kind of digital government
should we be investing in
now

To deliver **seamless** systems:

easy to upgrade

cheap to replace

simple to maintain

trusted

invisible

In 25 years?

Thank you



State Library of WA:

Students at a computer course at university [picture]
Stevenson, Kinder & Scott Corporate Photography.