



think
with Google™

The image features a central light-colored wooden circle with a visible grain pattern. Inside this circle, the word "think" is written in a large, dark grey, lowercase sans-serif font. Below it, the word "with" is in a smaller, dark grey font, followed by the word "Google" in its signature multi-colored font (blue, red, yellow, blue, green). A small trademark symbol (™) is at the end of "Google". The background is a white brick wall. Three large, semi-transparent circles are overlaid on the wall: a large teal one in the top right, a medium blue one in the bottom right, and a teal one in the bottom left.

Mobile Assets

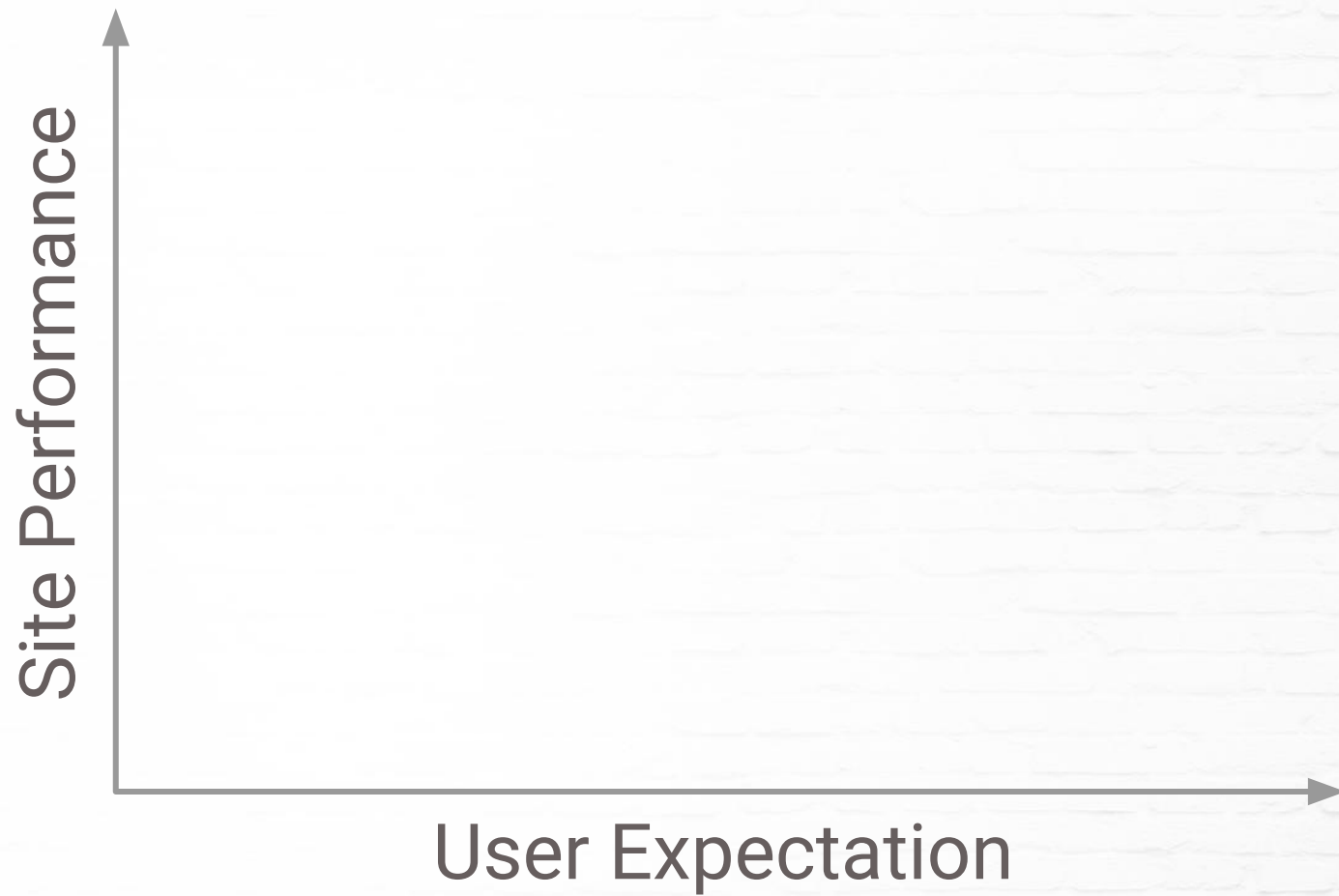
Rainer Borchert, Google

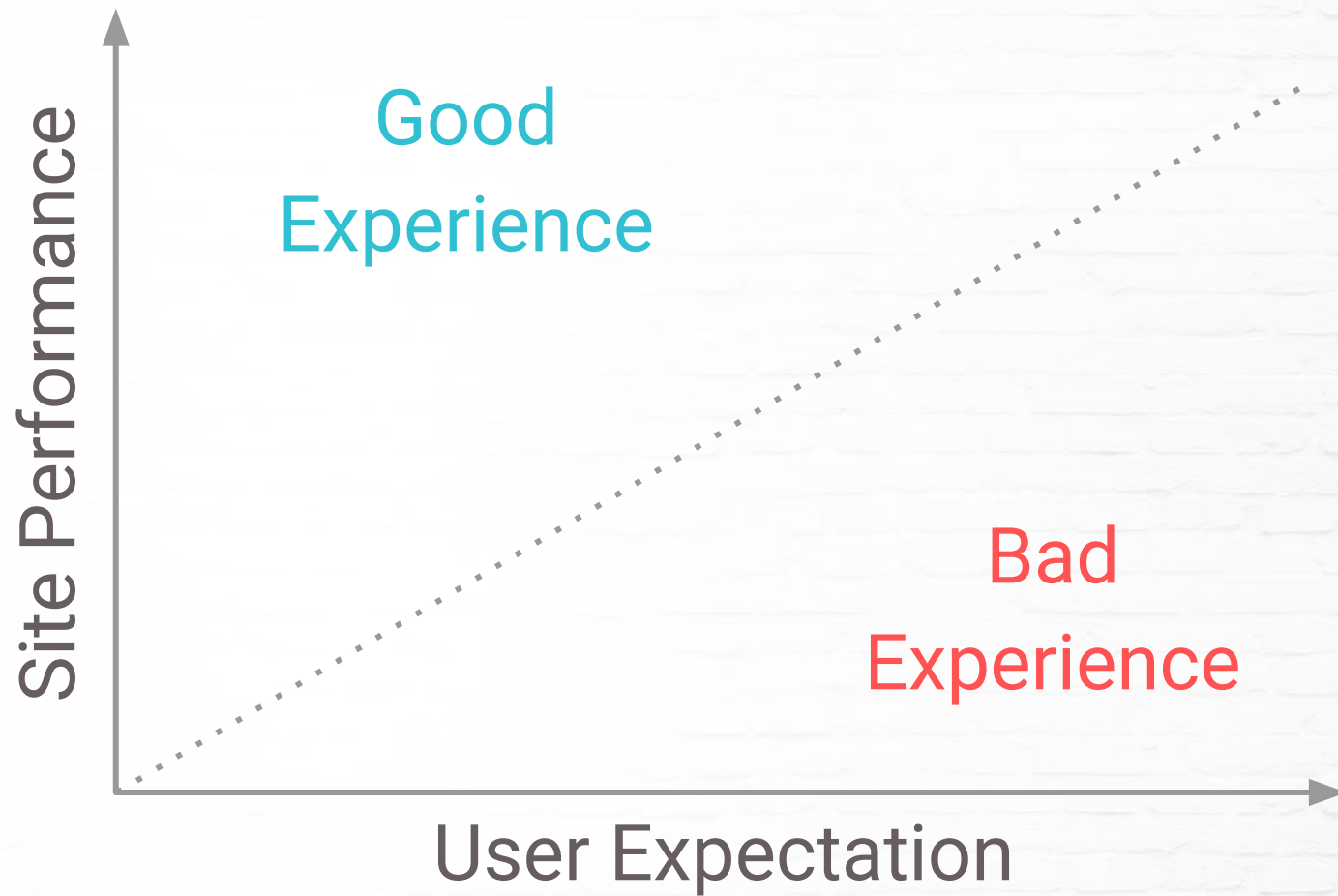
Industry Leader

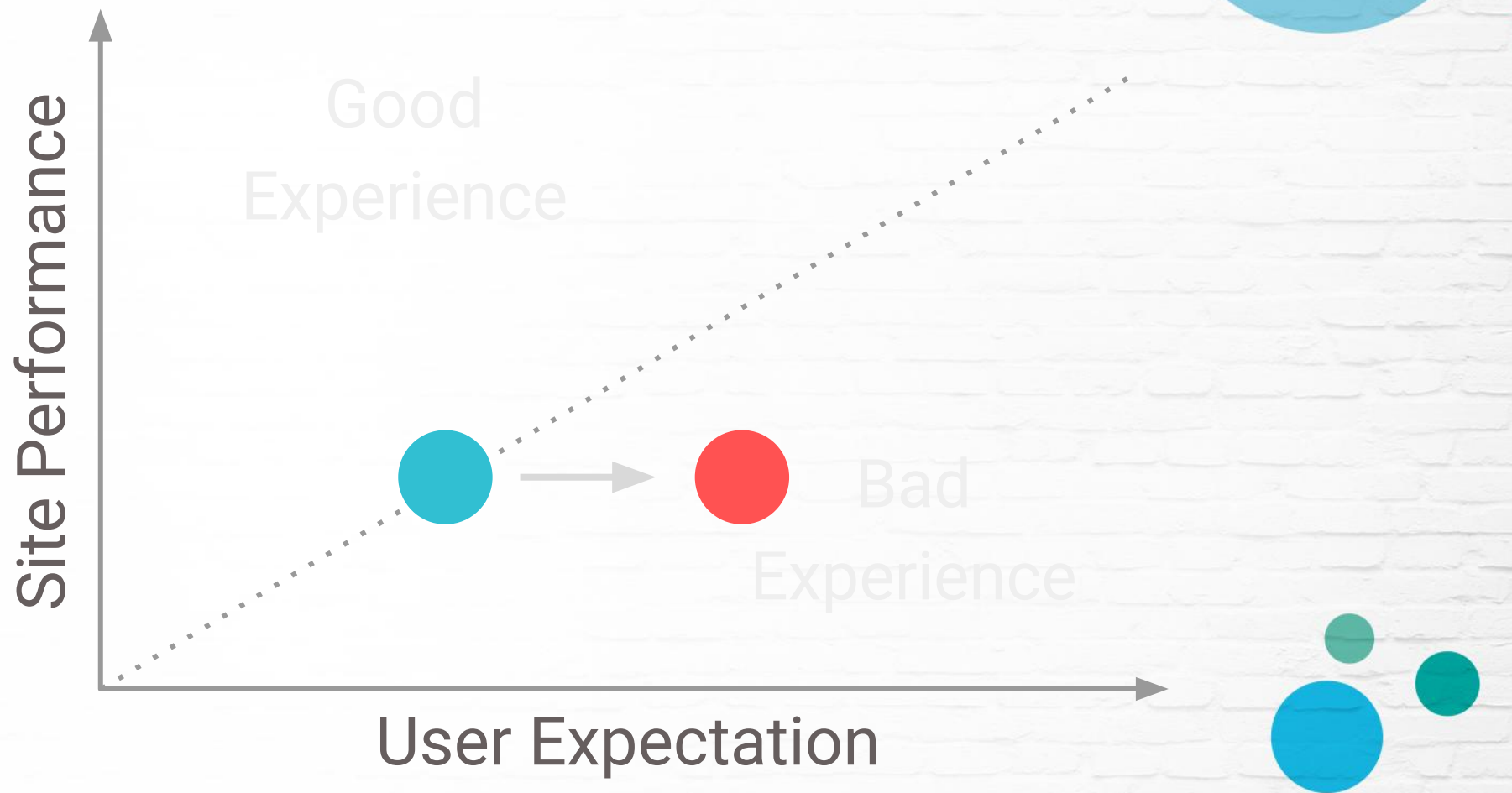
#twg17

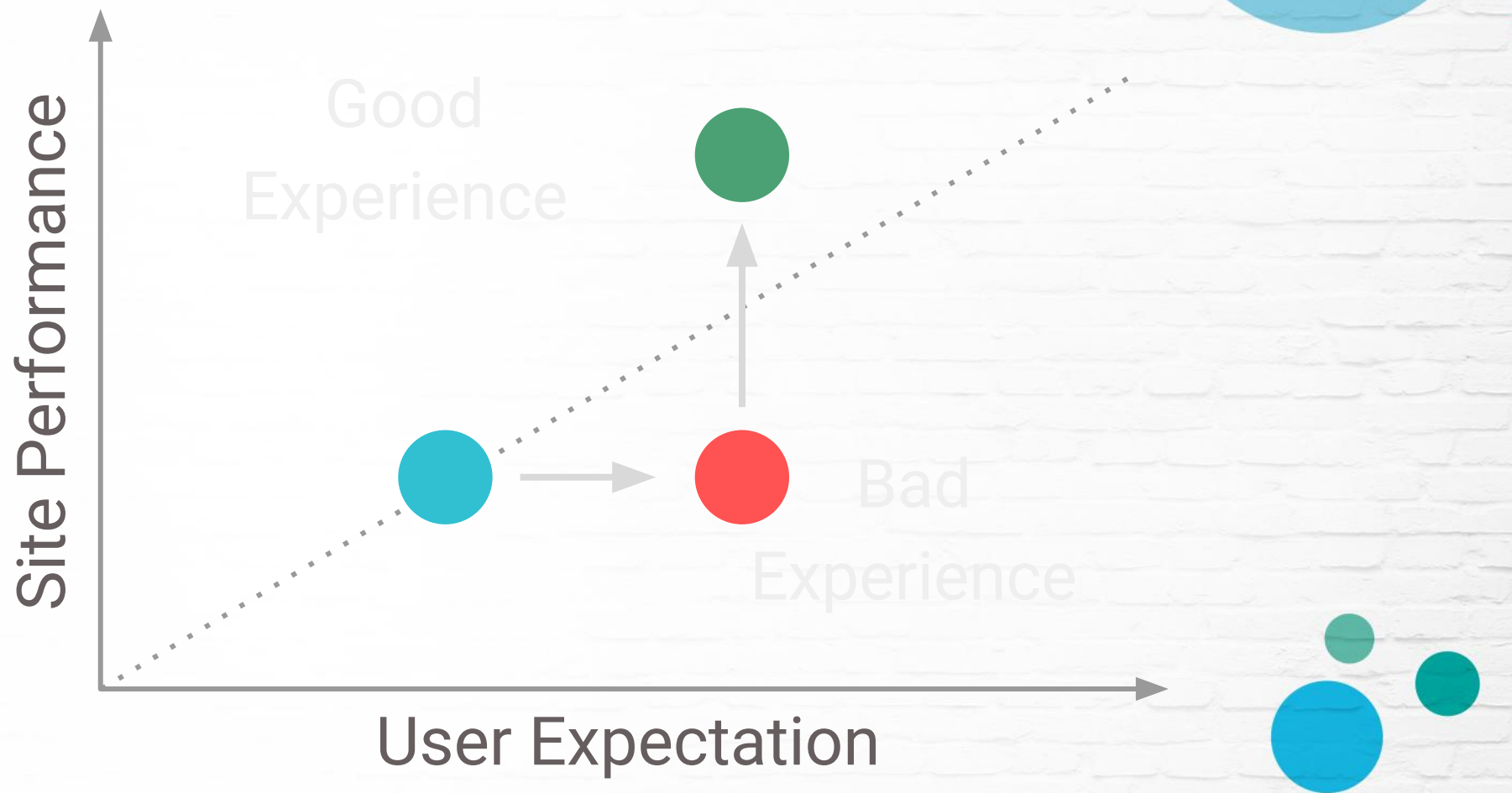
LTP

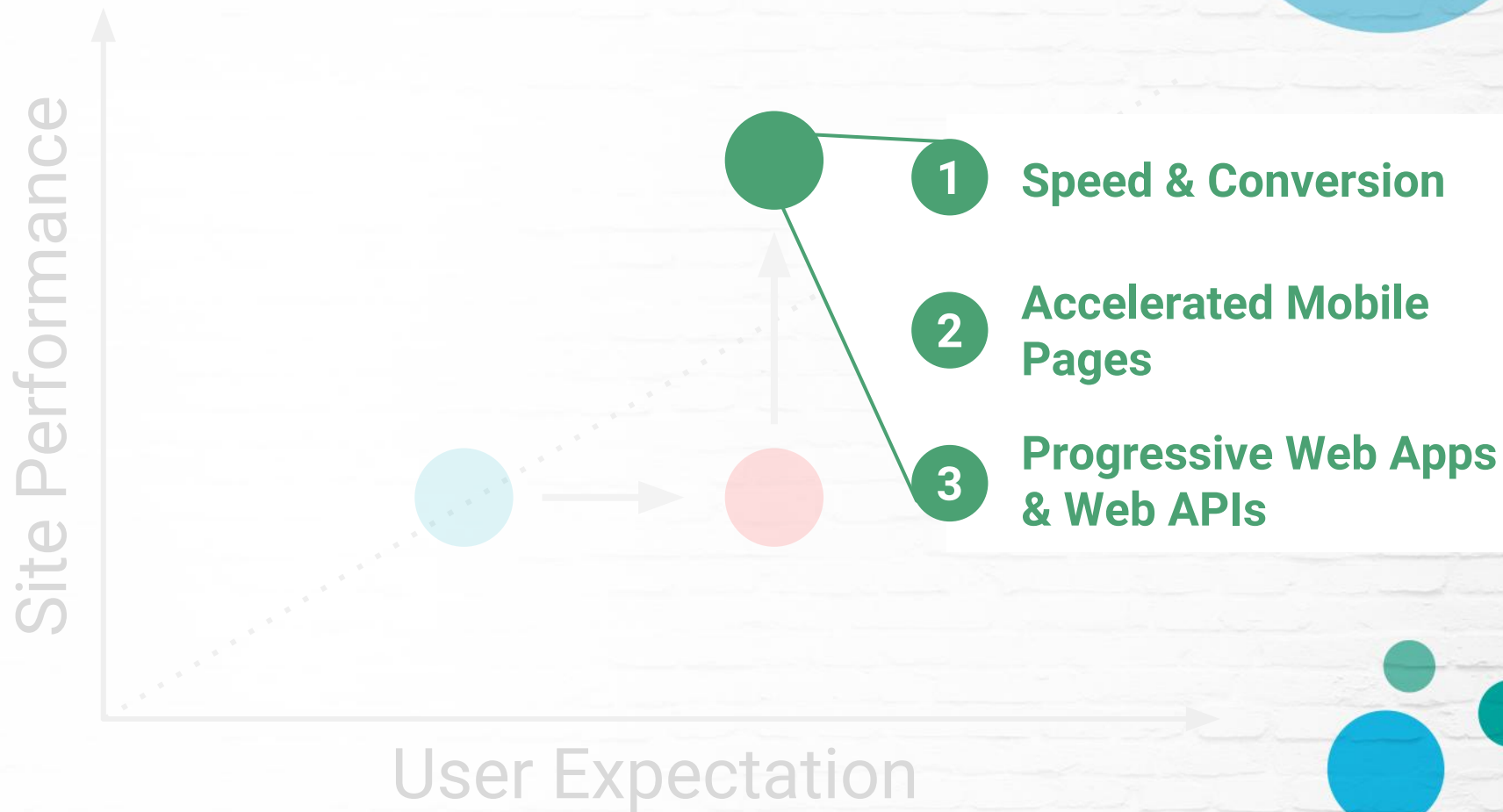














6 Popular Conversion Pitfalls that Kill Fast Load Times

...and How to Avoid them

Martin Loss, Google

Mobile Specialist

Urs Enke, Google

Solutions Engineer

#twg17



GÖTTENLÄN 22 KAMERA HANDY STATION GÖTTENLÄN 22



Gänsemarkt

Gänsemarkt






East Name:
bourienne

* Address:

* City or APO/FPO/DPO

APO/FPO/DPO Help

* State:
Alaska 

* Zip Code:

Contact Information

*Primary Phone:

Evening Phone:

Mobile Phone:

Enter mobile number to receive order status updates by text.

Messaging rates may apply.

*Email:

* Retype Email:

☐ Please send me Email updates including

- Free shipping and other discounts
- Sneak previews and special events


Shipping Options

- Please select one.

☒ Ship to Billing Address


☐ Ship to Other Address

☐ FREE - Ship to a Store (Gift Wrapped in Store!)

2nd Business Day - \$15.95 

Kay Shipping Policy

NEXT STEP

 **BACK TO TOP**





Average speed index of **industry leaders** in Germany

Travel

Finance

Retail

4.9s **4.1s** **3.6s**

Source: [EMEA Performance Summit](#), Study betw. Top 20 companies across 3 industries in 7 countries

Google

Average speed index of **advertisers** in Germany



Source: [ThinkWithGoogle, 2017](#), mobile ads landing pages



13 seconds

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IN THIS ROOM

What is a good load time?



1-2 seconds: Good

3-6 seconds: Average, but try to improve it.

7-10 seconds: Poor. Get to work.

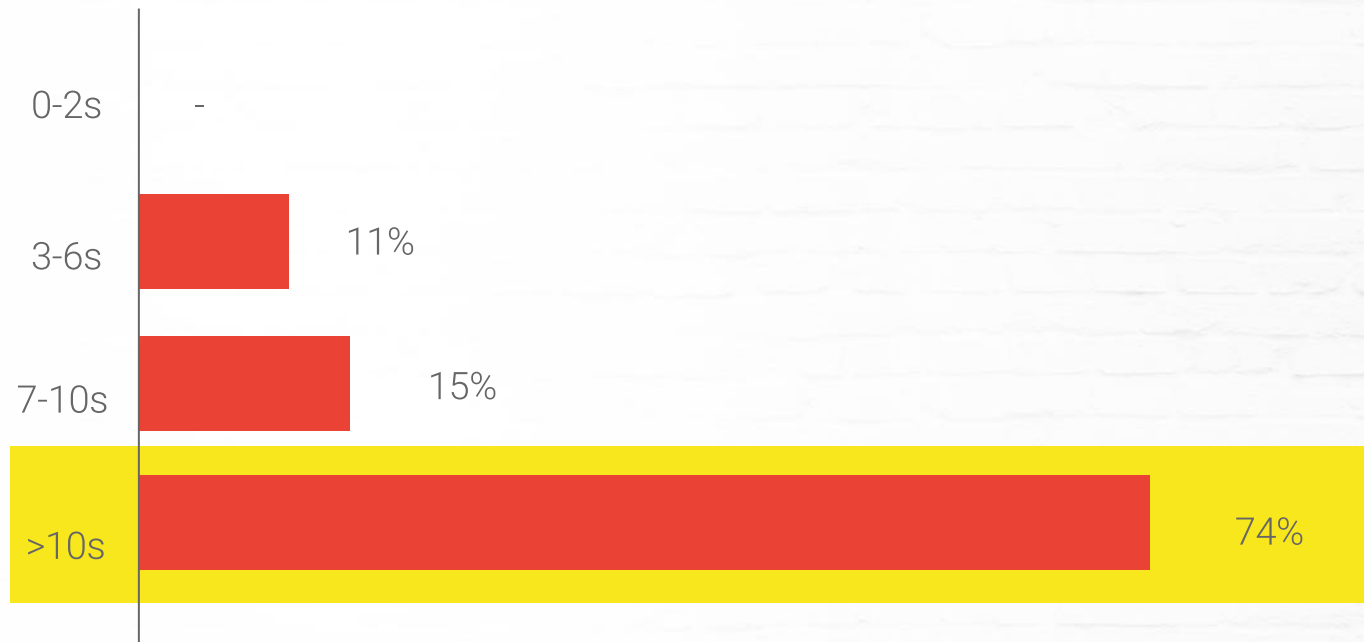
10+ seconds: I'm very, very sorry.

–Jeremy Smith, Conversion Optimization Expert



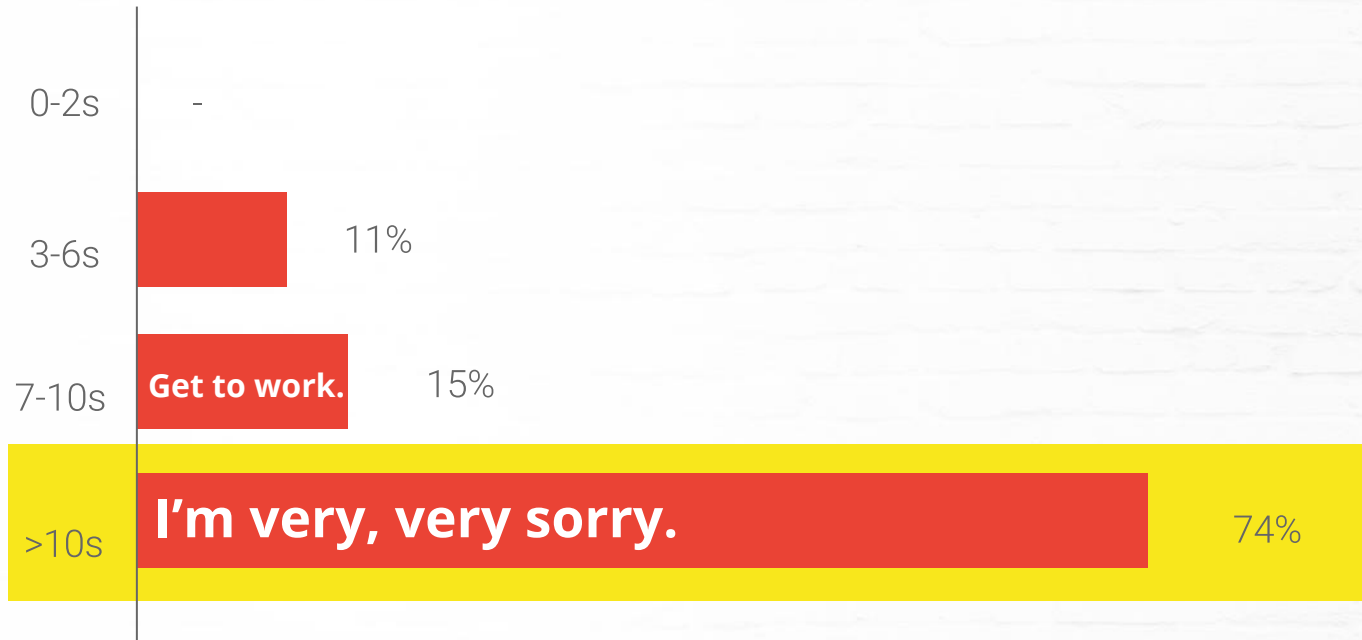
IN THIS ROOM

Distribution of pagespeed



IN THIS ROOM

Distribution of pagespeed



Use custom GA
report for more
insights

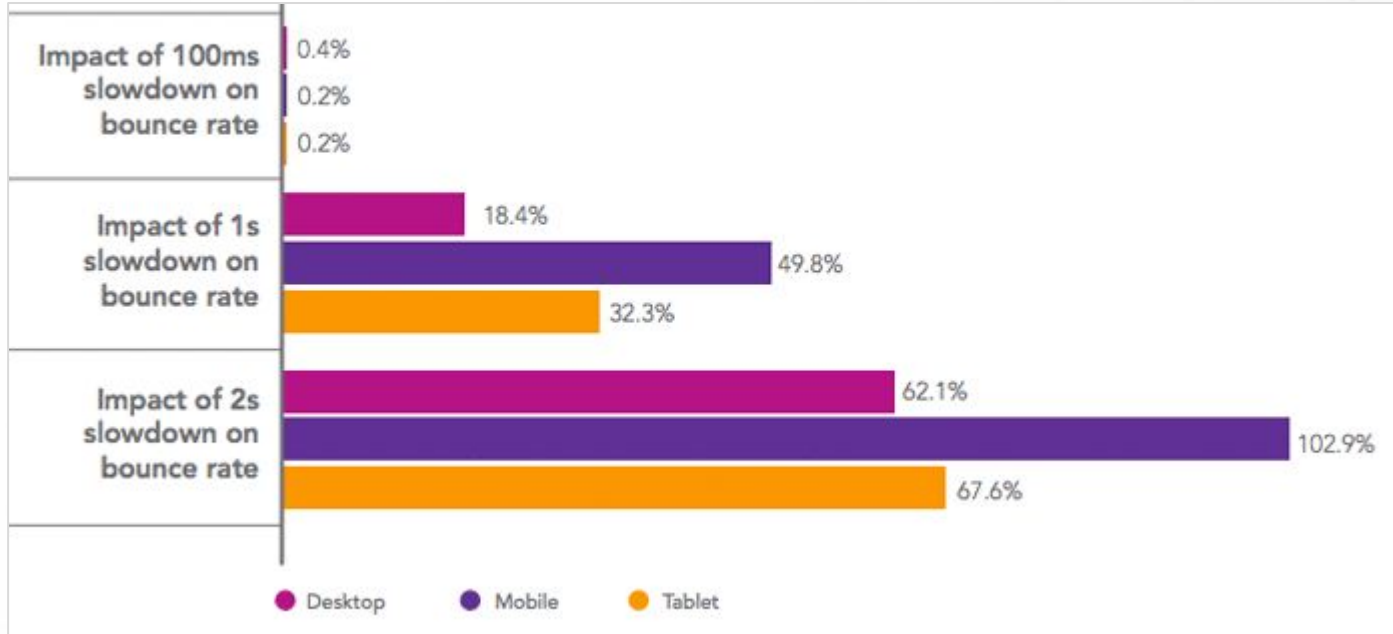
→ goo.gl/49bQNZ



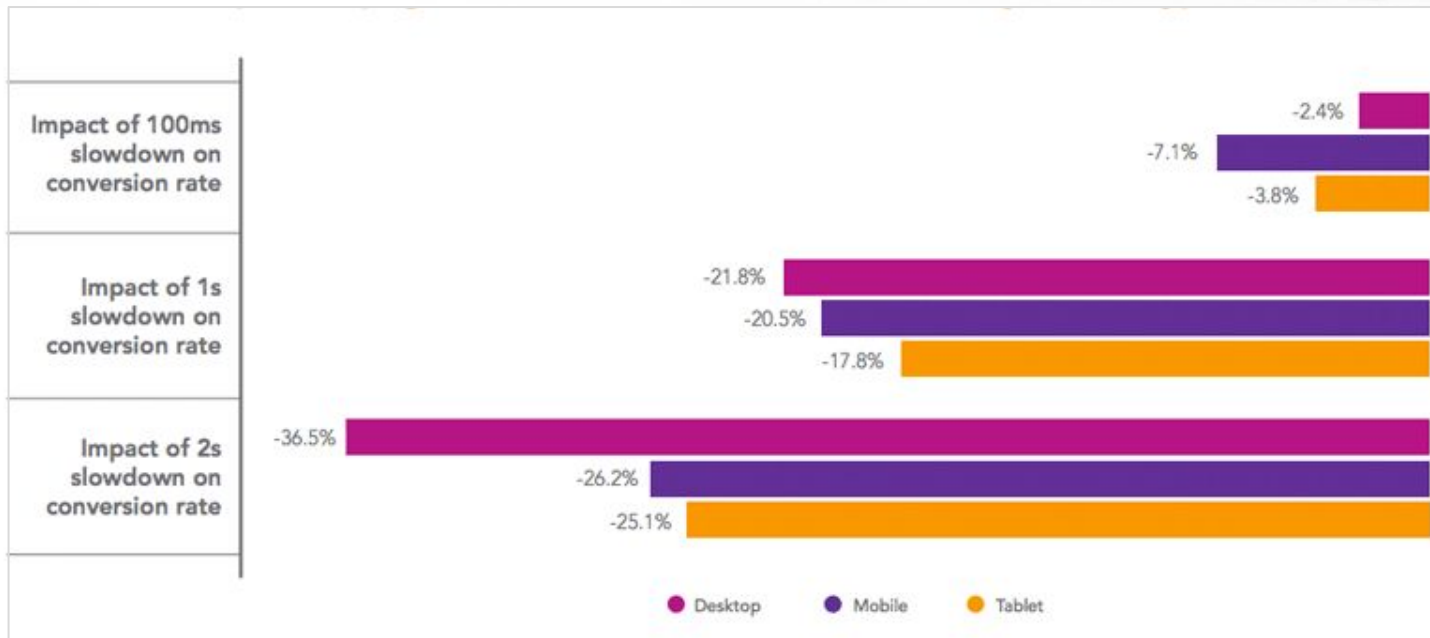
Page speed = \$\$\$

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Users are sensitive to waiting, especially on mobile



Slow pages kill conversions

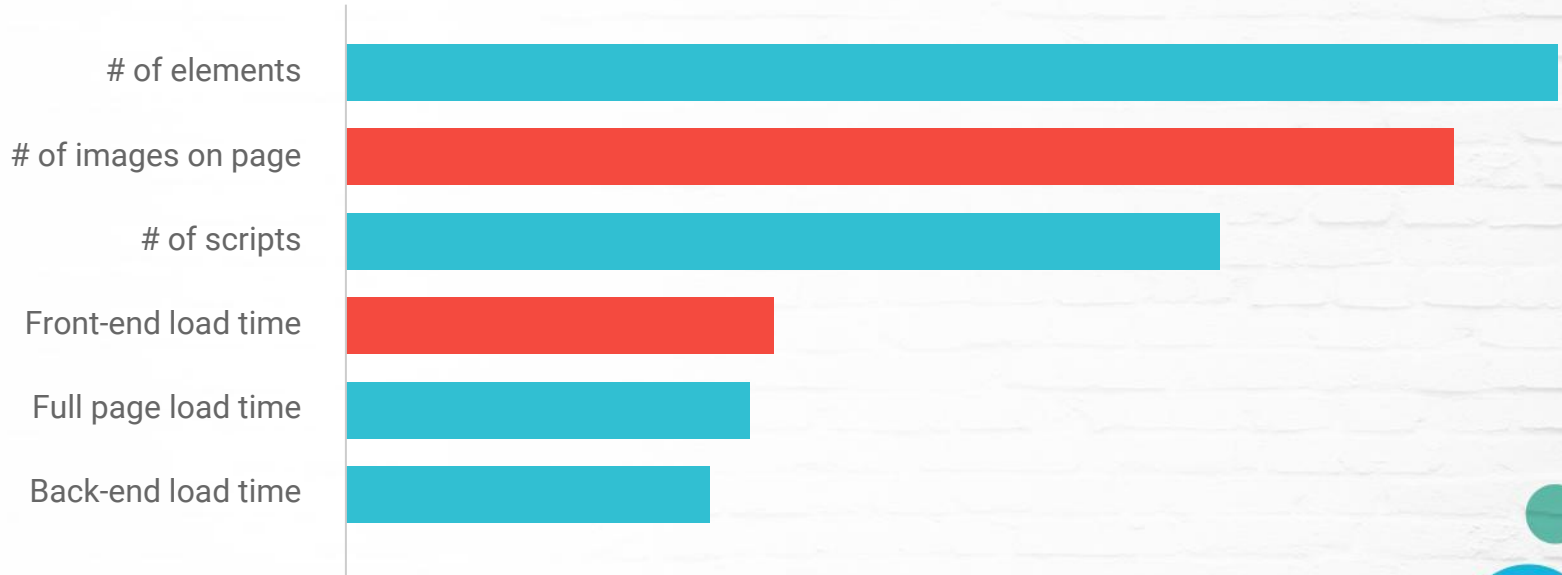




Predictors of conversions

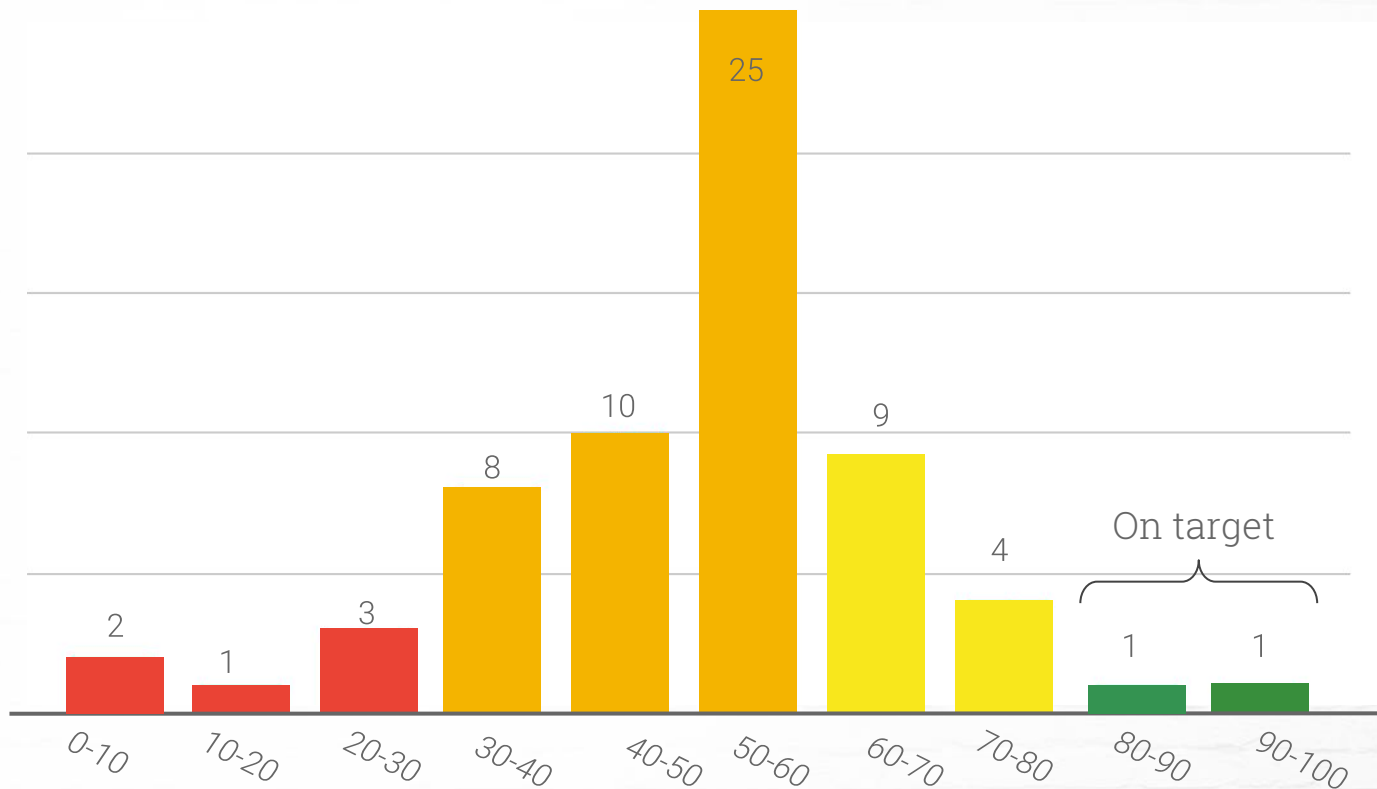
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Top predictors of conversion rate



IN THIS ROOM

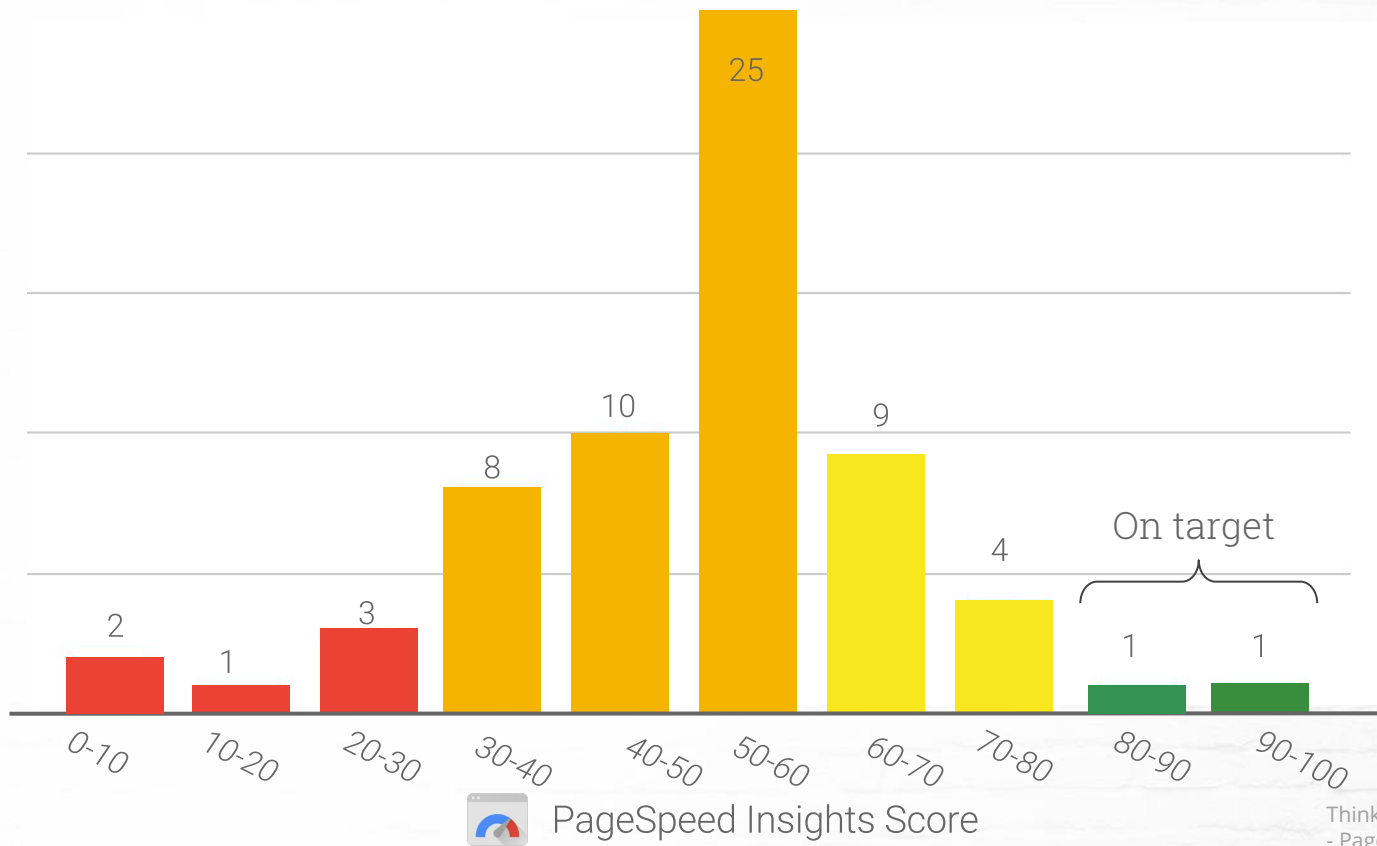
Distribution of pagespeed insights



PageSpeed Insights Score

IN THIS ROOM

Distribution of pagespeed insights



Request detailed technical deck:

→ Ask your AM

→ goo.gl/J13OQA



So, what can we do?

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CONVERSION BY SPEED

Measuring Speed

- What to measure?
- How to measure?
- What to aim for?

Landing Pages

Ad Targets

Home Page



Measuring Speed

- What to measure?
- How to measure?
- What to aim for?



PageSpeed Insights



WebPageTest



Chrome
(Developer Tools)

Measuring Speed

- What to measure?
- How to measure?
- What to aim for?

Competitors' sites

User tests

A/B tests



Check your tracking for completeness!



Pitfall 1: Server-side delays

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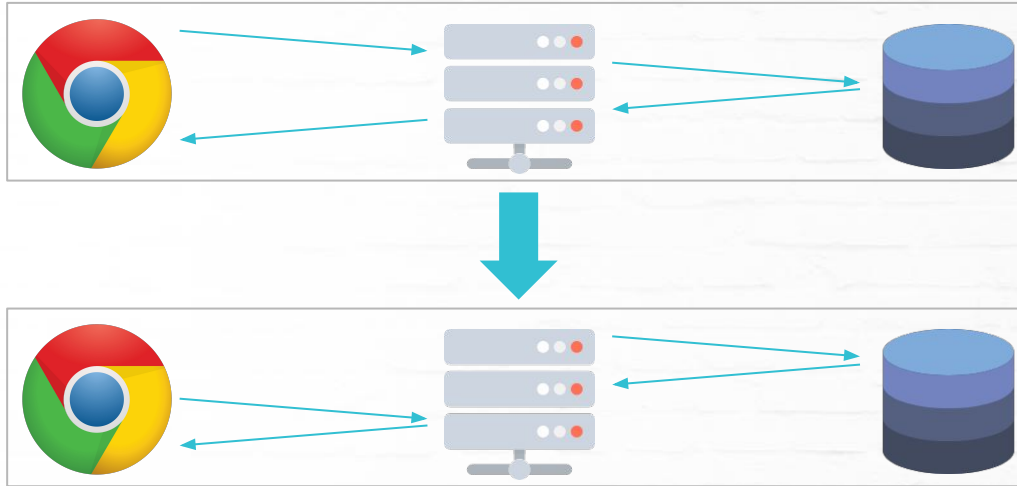
Pitfall 1: Server-side delays

- Avoid redirects
- Optimise or cache database requests



Pitfall 1: Server-side delays

- Avoid redirects
- Optimise or cache database requests





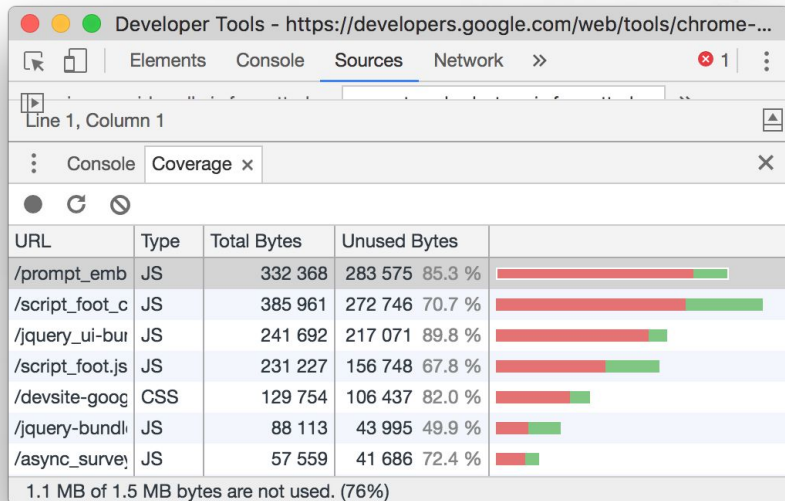
Pitfall 2: Transferring more than needed

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CONVERSION BY SPEED

Pitfall 2: Transferring more than needed

- Scripts & Style Sheets
- Images
- Others



Split

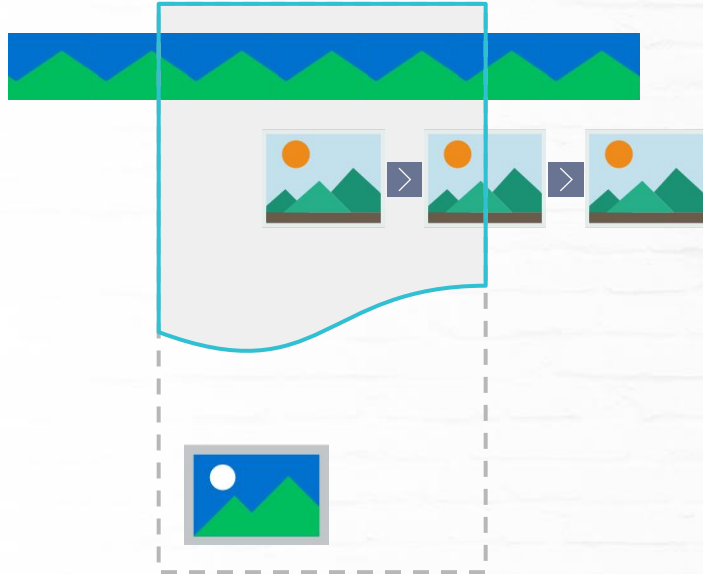
Defer

Outsource

Omit

Pitfall 2: Transferring more than needed

- Scripts & Style Sheets
- Images
- Others



Pitfall 2: Transferring more than needed

- Scripts & Style Sheets
- Images
- Others

Fonts

А а Б б В в Г г Д д
Е е Ё ё Ж ж З з
И и Й й К к Л л
М м Н н О о П п
Р р С с Т т У у
Ф ф Х х Ц ц Ч ч
Ш ш Щ щ Ъ ъ Ы ы
Ь ь Э э Ю ю Я я

analyse with [FontForge](#)

Tracking



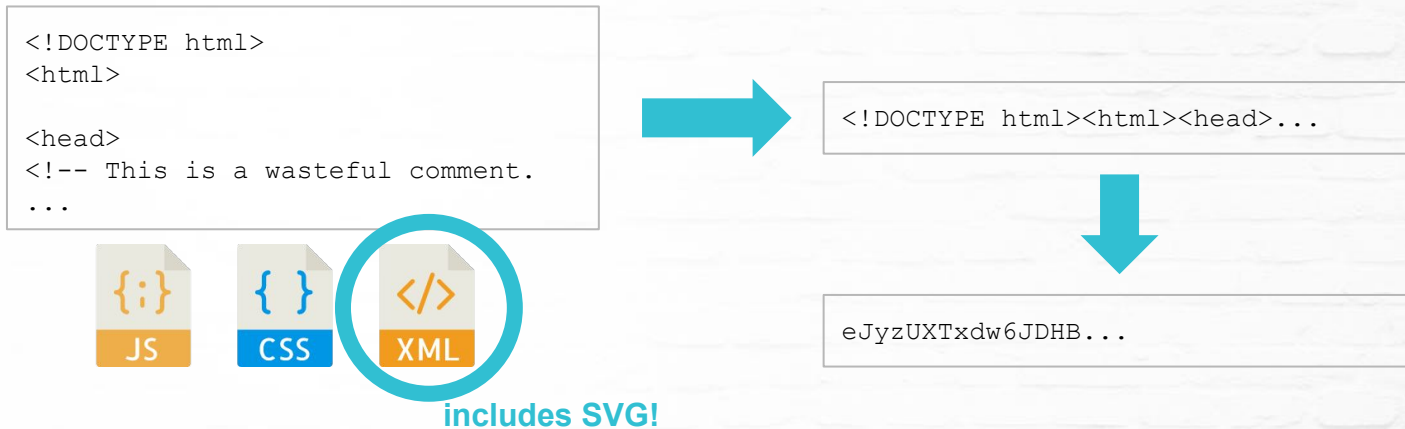


Pitfall 3: Forgetting some compression

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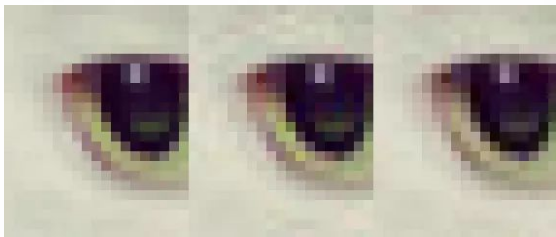
Pitfall 3: Forgetting some compression

- Minify and compress text-based resources
- Negotiate quality of images and use best algorithm



Pitfall 3: Forgetting some compression

- Minify and compress text-based resources
- Negotiate quality of images and use best algorithm



Required resolution?

Tolerable artifacts?

Optimal settings?

Alternative algorithms?

Example tools to compress images as far as 'acceptable':

<https://imageoptim.com/>, <https://compressor.io/>,
<https://tinypng.com/>, <http://www.guetzli.it/>

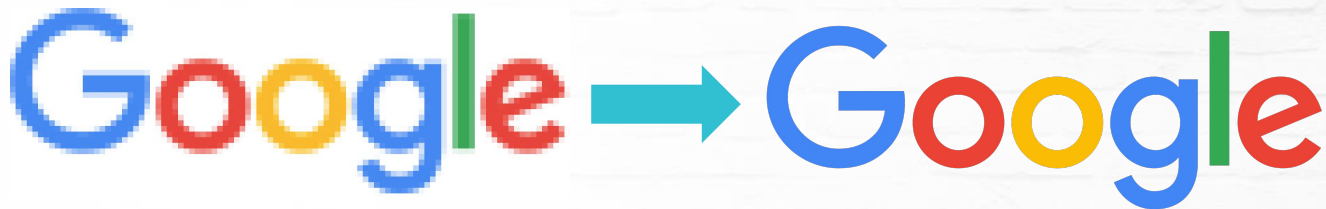


Pitfall 4: Using unsuitable formats

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Pitfall 4: Using unsuitable formats

- Vectorise non-photographic images
- Separate symbolic layers from photos



Pitfall 4: Using unsuitable formats

- Vectorise non-photographic images
- Separate symbolic layers from photos



150 kB



100 kB + 2 kB

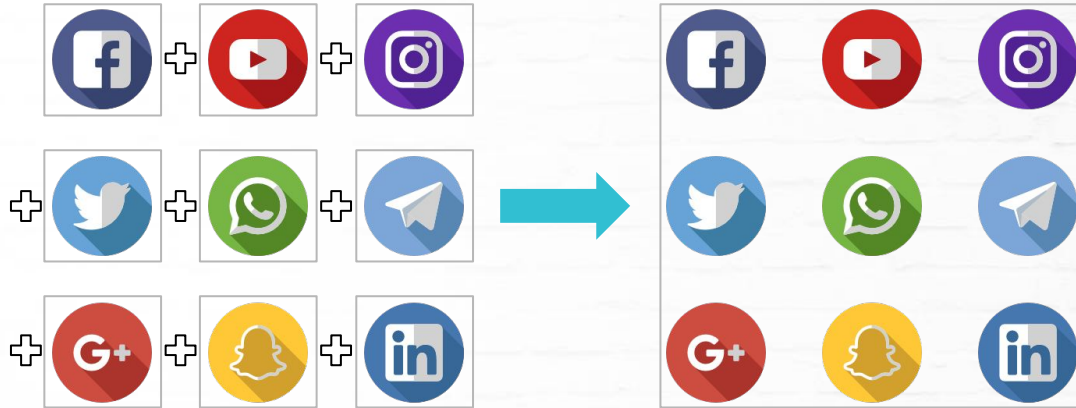


Pitfall 5: Too many transfers

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Pitfall 5: Too many transfers

- Combine symbolic images to “sprite maps”
- Combine scripts / style sheets
- Push content (HTTP/2)



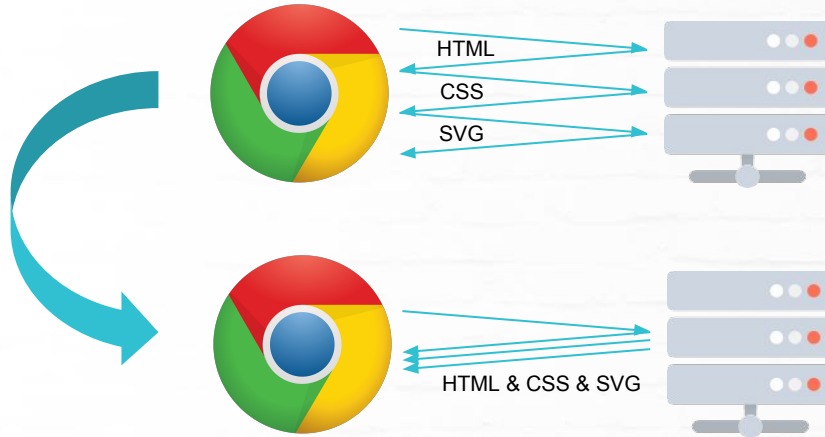
Example tools: [Compass](#), [Stitches](#)

- Combine symbolic images to “sprite maps”
- **Combine scripts / style sheets**
- Push content (HTTP/2)



Pitfall 5: Too many transfers

- Combine symbolic images to “sprite maps”
- Combine scripts / style sheets
- Push content (HTTP/2)





Pitfall 6: Fix but forget

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CONVERSION BY SPEED

Pitfall 6: Fix but forget



Automation



Monitoring



Speed Budgeting



Stay tuned...

...for the live, hands-on presentations on this track about:

- **Accelerated Mobile Pages**
Feature-restricted, yet fast-rendered web pages
- **Progressive Web Apps**
App-like experiences on the web

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Thank you!

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