

Testing for "good" internet delivery

Web Performance Testing: The Last Mile



SIGIST JUNE 2011

The World is Changing

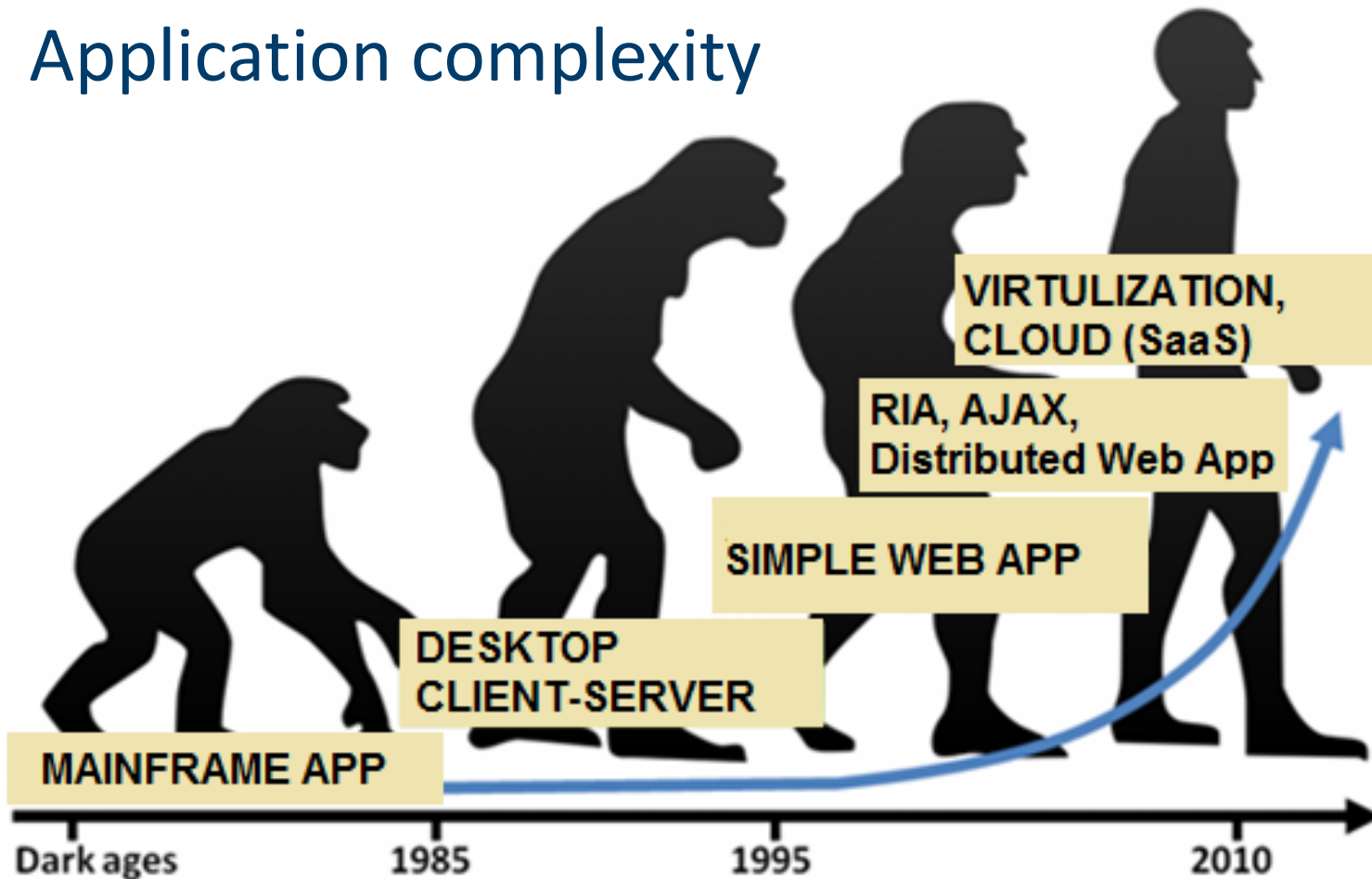
Internet is everywhere!

- Social Media
- Facebook has over 700 million users!!!
- Excellent opportunities for E-commerce and marketing
- Mobile internet



The World is Changing

Application complexity



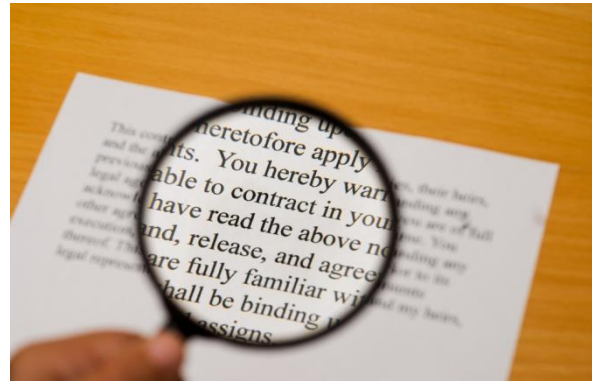
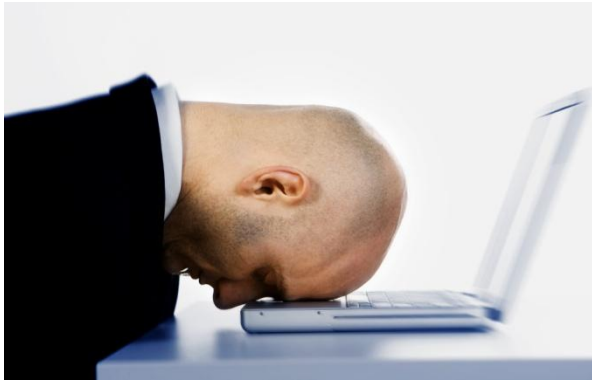
The World is Changing

The Now! culture

- Connectivity and Information are pervasive
- Generation Y are now taxpayers
- Everyone expects service Now!
- Won't be “holding the line”



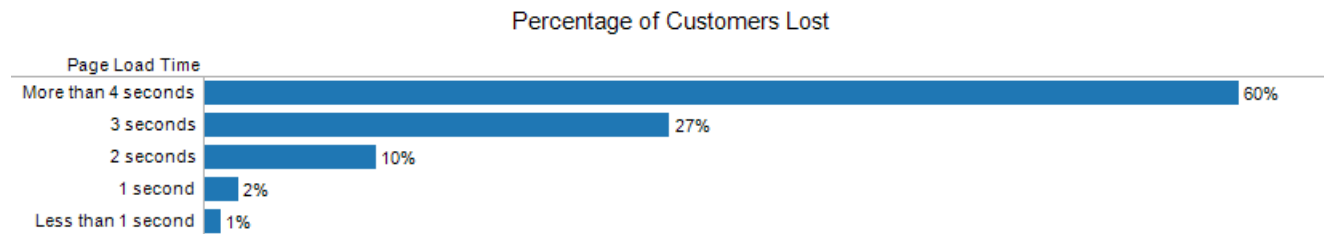
Importance of Page Speed



Importance of Page Speed

Usability, Revenue and Brand

- 40% of clients abandon web site if response > 3 seconds!*



- Bad performing web pages frustrate the client, impact the revenue, loyalty and brand reputation.

* www.akamai.com/2seconds

Importance of Page Speed

Web Stress exists!

“Brain wave analysis from the experiment revealed that participants had to concentrate up to 50% more when using badly performing websites, while facial muscle and behavioural analysis of the subjects also revealed greater agitation and stress in these periods.”

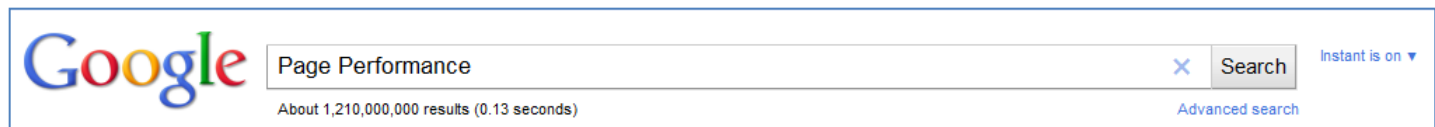


Web Stress: A Wake-Up Call for European Business - http://www.ca.com/Files/SupportingPieces/final_webstress_survey_report_229296.pdf

Importance of Page Speed

Search Engines

- Google takes pages speed into account in web search ranking



Importance of Page Speed

Mobile devices

- Massive increase of internet traffic over mobile devices
- Cisco predicts that Internet traffic over mobile devices will increase as much as 26-fold by 2015*
- Approximately 40 per cent of all mobile connections in 2011 will be for internet data

* http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-520862.html

User Experience is Everything

If you buy a pair of shoes on “TradeMe” your experience includes the time the courier takes.

When you use government services online, it includes the time it takes to complete the e-service request.

Web Performance and QA

Back End Optimisation

- Optimisation on the server side
 - System Tuning and Diagnosis
 - Load Testing and Scalability
 - Availability
 - Stability
 - Security

Web Performance and QA

Back End Optimisation

Specialised Resources



Expensive Tools



Web Performance and QA

Front End Optimisation

- Optimisation on the client side

Freeware



Low hanging fruit



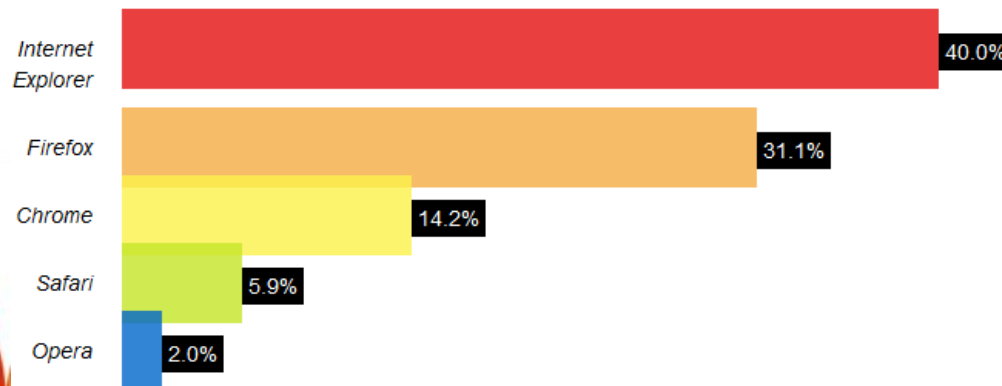
Web Performance and QA



Front End Optimisation

- Browser type impacts front end performance
- Test using the browser your clients are using!
 - Browser Stats (Jan 2011 –W3Counter)

Web Browser Market Share



Practical Example



Tips and tricks

How to make your web page load faster?

1 Fewer HTTP Requests

2 Decrease download size

3 Decrease request size

4 Optimise the CACHE

5 Stylesheet References at the top

6 JS references at the bottom

7 Reduce 301

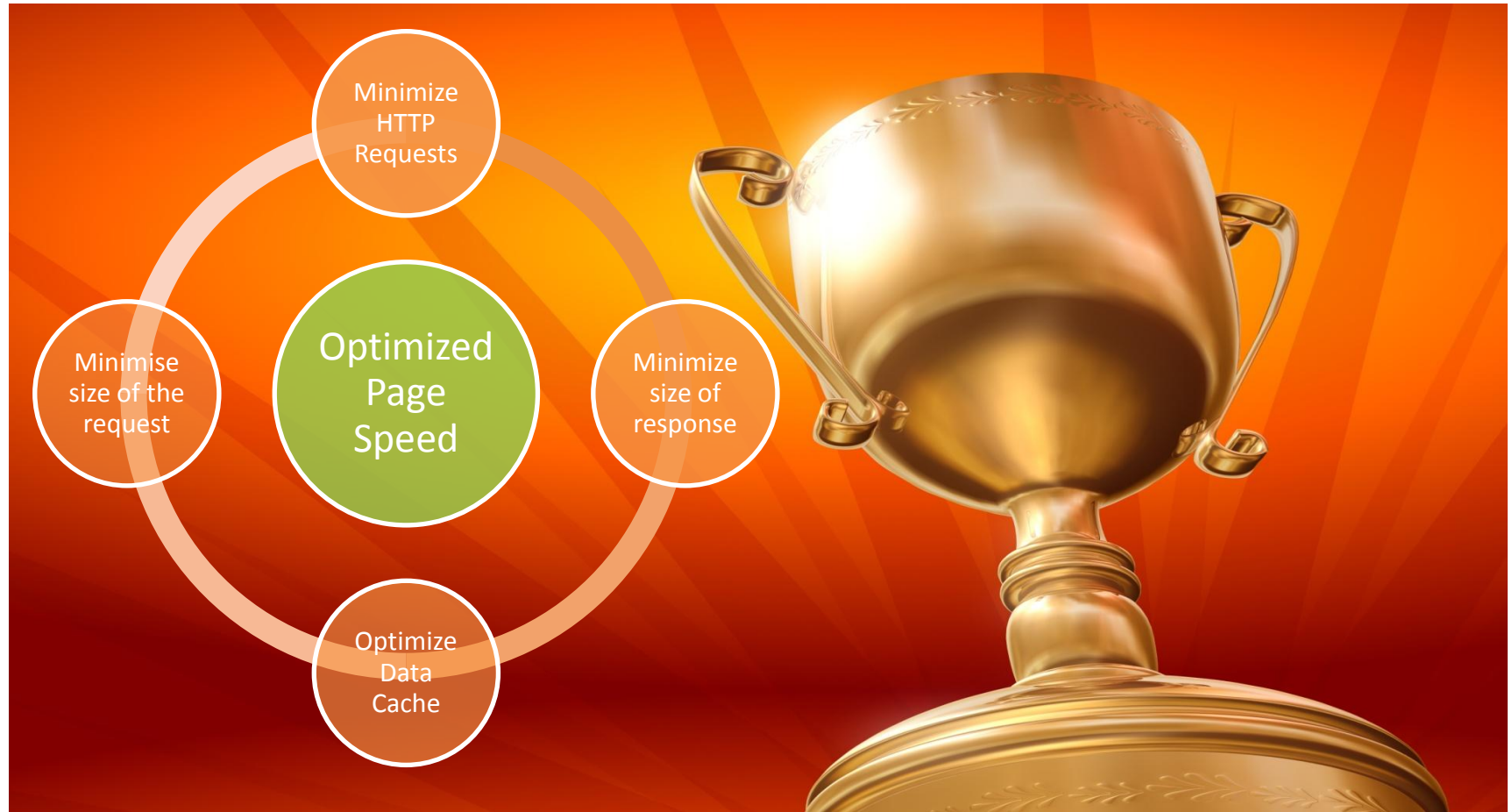
8 Avoid 401

9 No Duplicates

10 Keep-Alive



Best Practices for Web Optimisation

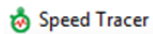
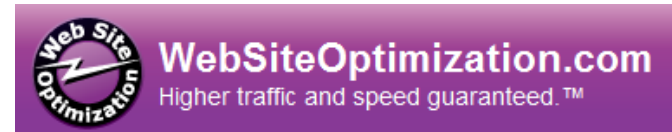
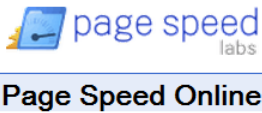


Complex Changes



- (Re-)structuring the page
- How do we shrink the framework
- Session management
- Browser in-efficiencies
- Optimise JS - block resource downloads
- Expensive DOM manipulations
- Reduce and aggregate XHR calls

The Tools

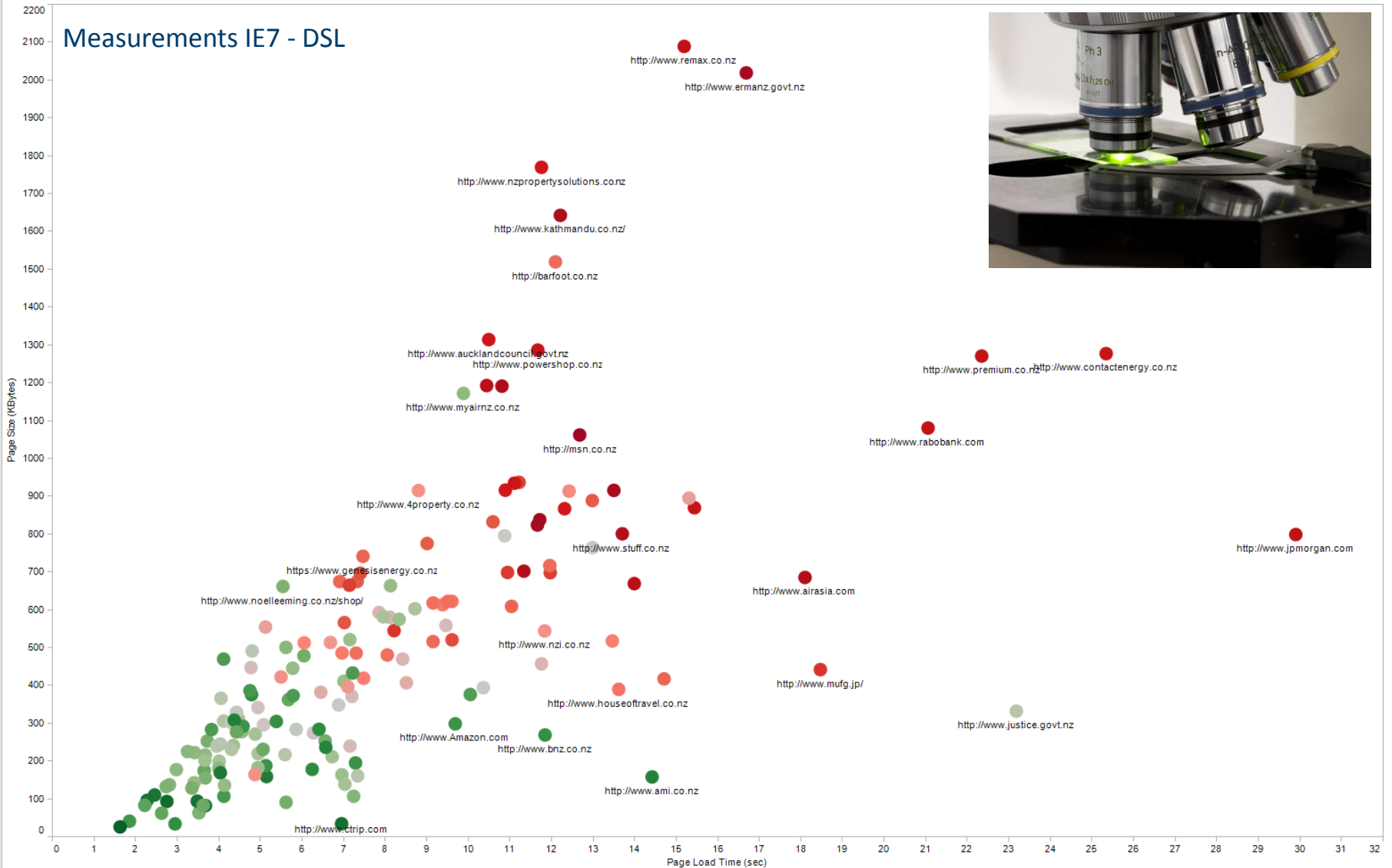


Interpretation is Key

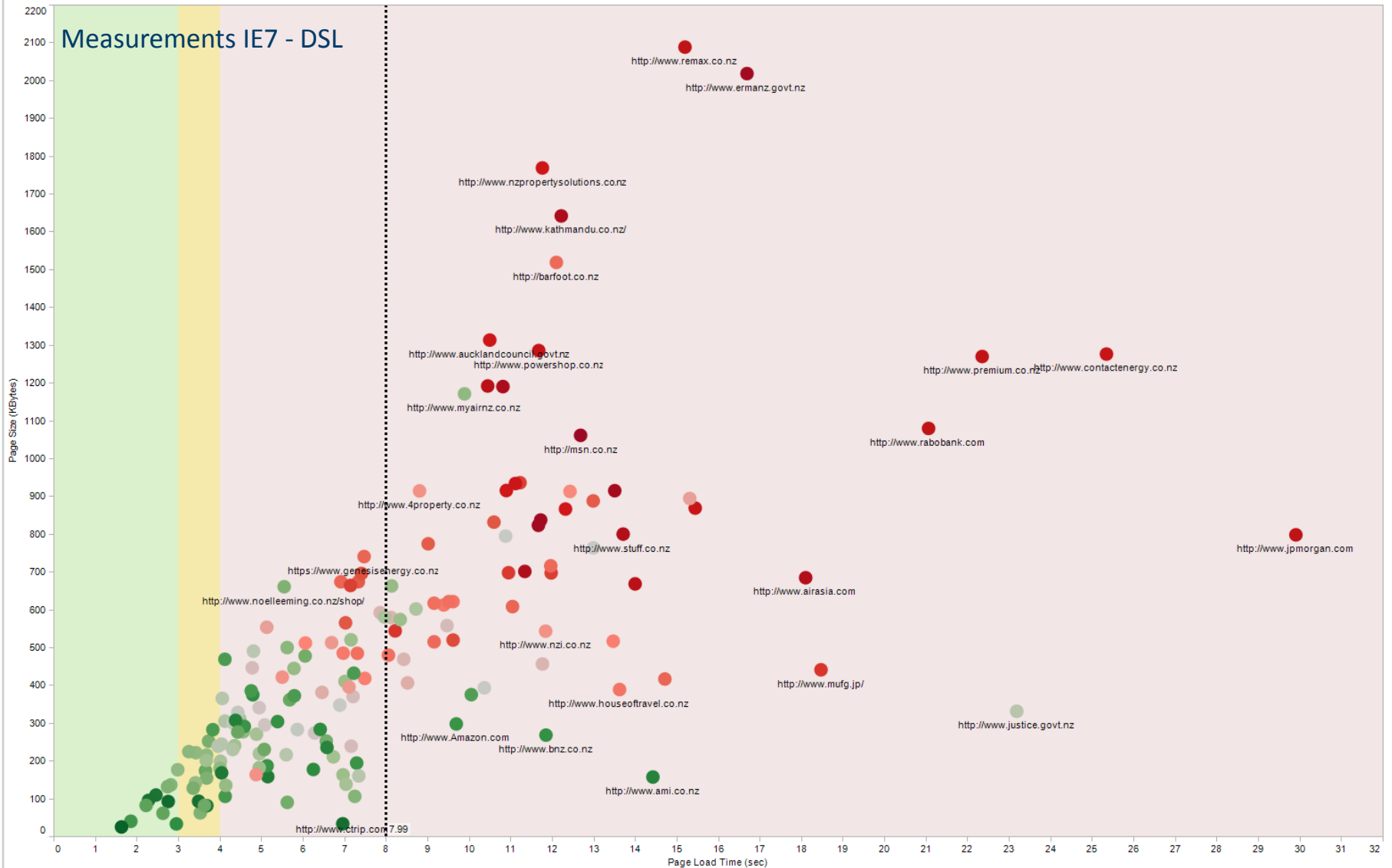
Understand the rules of the game!



Do NZ Websites need optimisation?



Do NZ Websites need optimisation?





*Thank
you!*



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