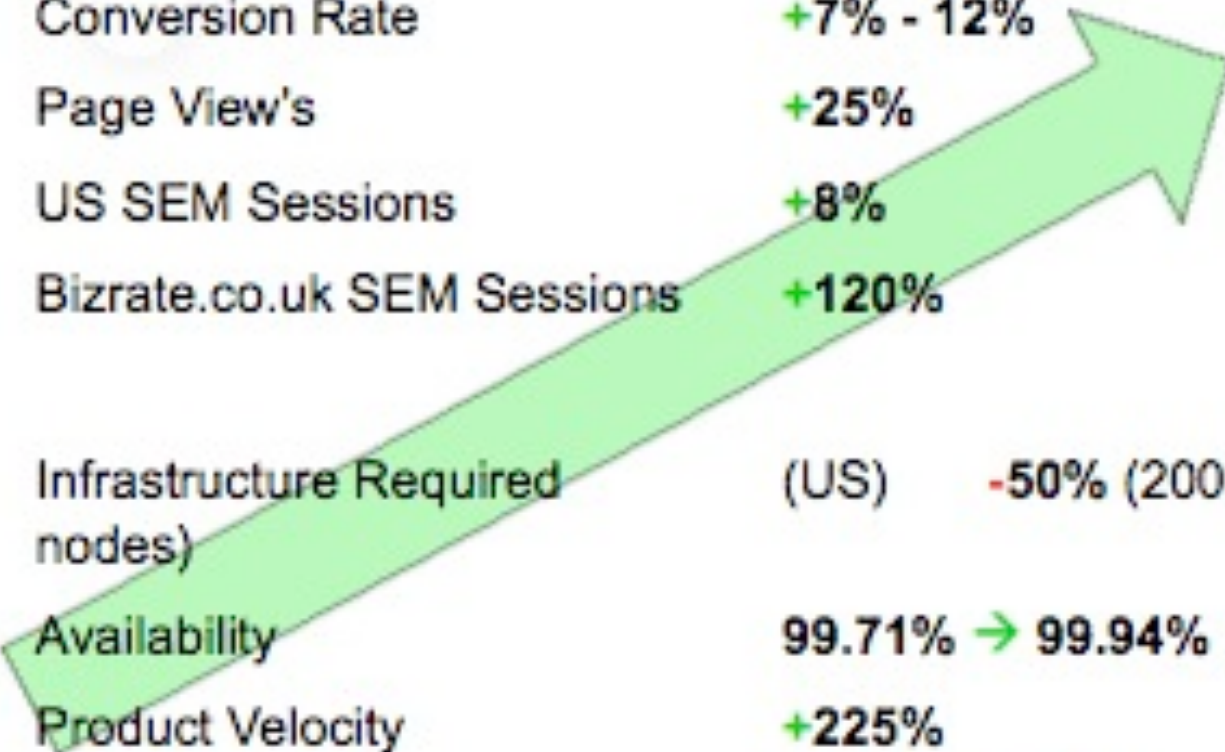


WHY TALK ABOUT PERFORMANCE?

SHOPZILLA:
-3.5 SECONDS

Performance Summary

- Conversion Rate **+7% - 12%**
 - Page View's **+25%**
 - US SEM Sessions **+8%**
 - Bizrate.co.uk SEM Sessions **+120%**

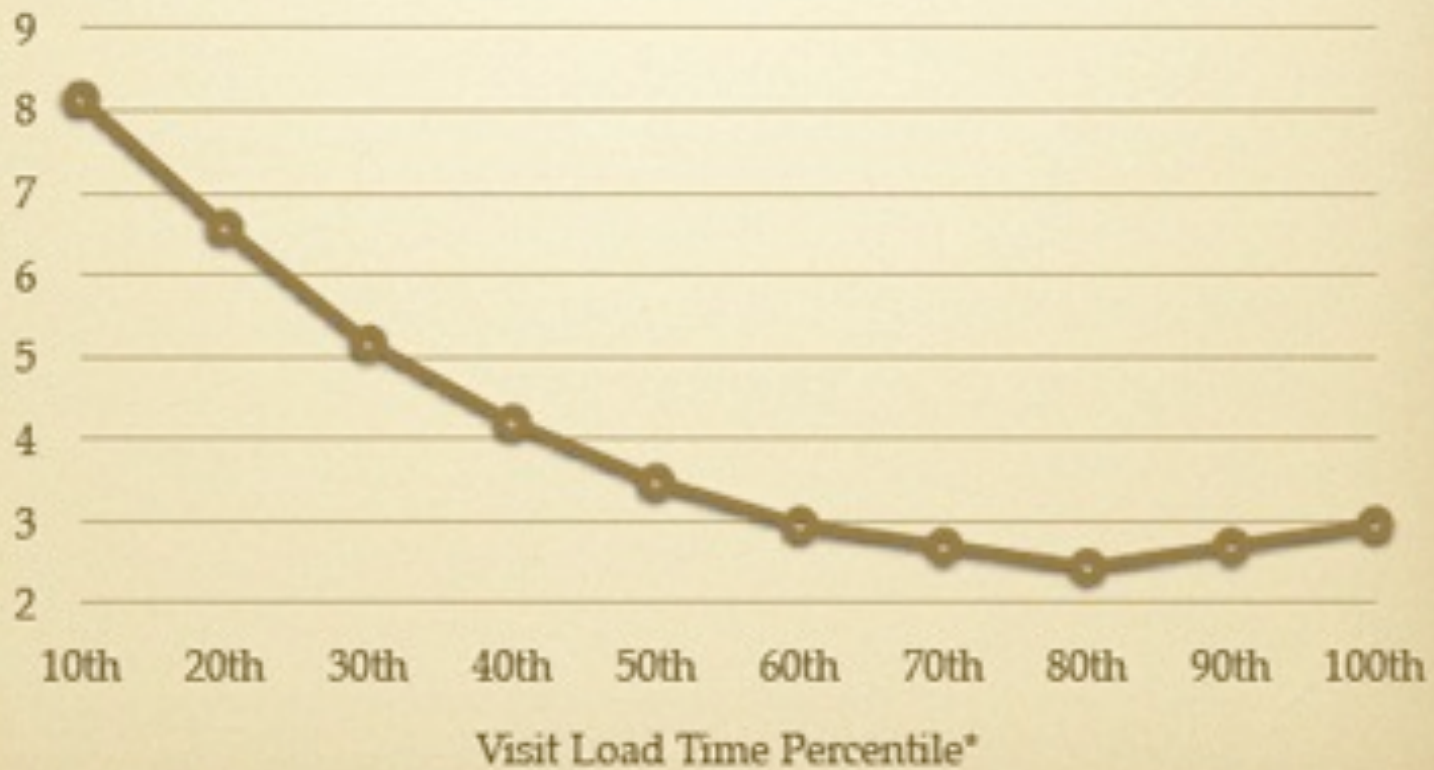
 - Infrastructure Required (US) **-50%** (200 vs 402 nodes)
 - Availability **99.71% → 99.94%**
 - Product Velocity **+225%**
 - Release Cost **\$1,000's → \$80**
- 



AOL: IMPACT ON PAGE VIEWS

AOL Money & Finance

○ Average Page Views per Visit



*10th is fastest 10% of the visit sample, 100th is slowest 10%

BING & GOOGLE:

**+50, 200, 500,
1000, AND 2000**

[http://blip.tv/file/
2279751](http://blip.tv/file/2279751)

Server Delays Experiment: Results

	<i>Distinct Queries/User</i>	<i>Query Refinement</i>	<i>Revenue/User</i>	<i>Any Clicks</i>	<i>Satisfaction</i>	<i>Time to Click (increase in ms)</i>
50ms	-	-	-	-	-	-
200ms	-	-	-	-0.3%	-0.4%	500
500ms	-	-0.6%	-1.2%	-1.0%	-0.9%	1200
1000ms	-0.7%	-0.9%	-2.8%	-1.9%	-1.6%	1900
2000ms	-1.8%	-2.1%	-4.3%	-4.4%	-3.8%	3100

- Means no statistically significant change

- Strong negative impacts
- Roughly linear changes with increasing delay
- Time to Click changed by roughly double the delay

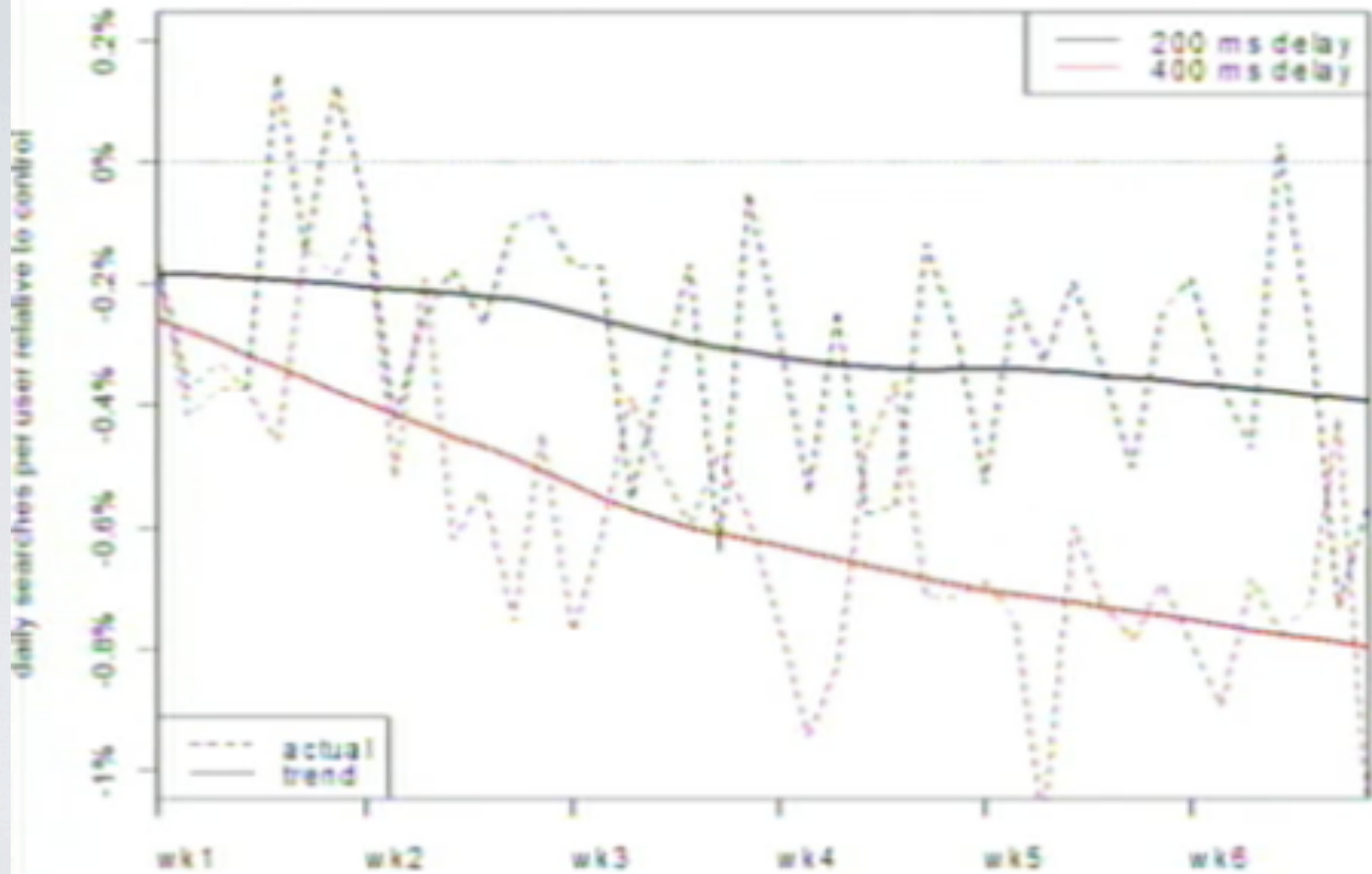
Search Traffic Impact

Type of Delay	Delay (ms)	Experiment Duration (weeks)	Impact on Average Daily Searches Per User
Pre-header	50	4	Not measurable
Pre-header	100	4	-0.20%
Post-header	200	6	-0.29%
Post-header	400	6	-0.59%
Post-ads	200	4	-0.30%

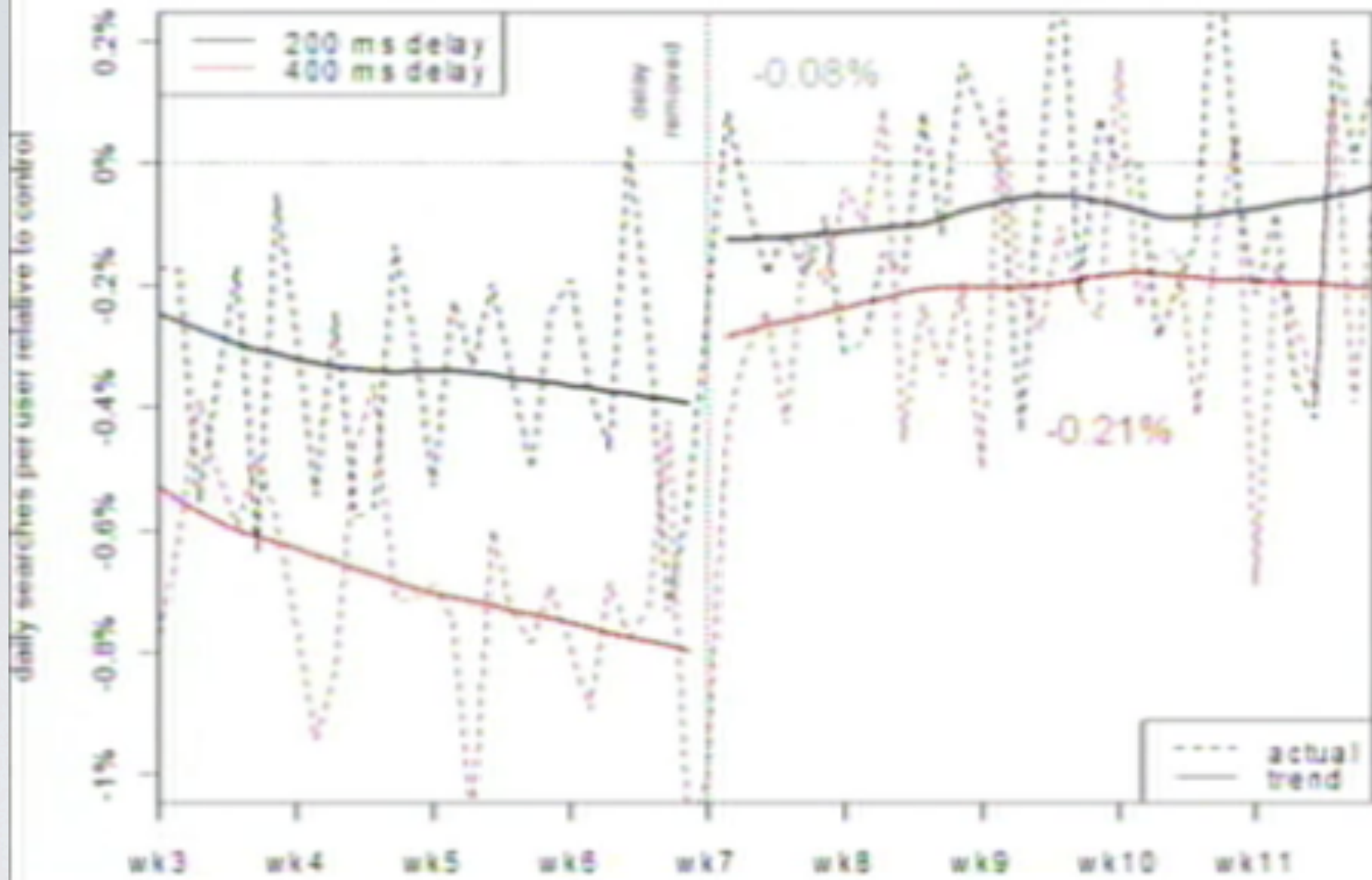
- Increase in abandonment heuristic = less satisfaction
 - Abandonment heuristic measures if a user stops interacting with search engine before they find what they are looking for
- Active users (users that search more often a priori) are more sensitive



Impact of Post-header Delays Over Time



Persistent Impact of Post-header Delay



**USERS CARE ABOUT
PERFORMANCE!**

FILE SIZE AND HTTP REQUESTS

are the biggest factor for front-end performance