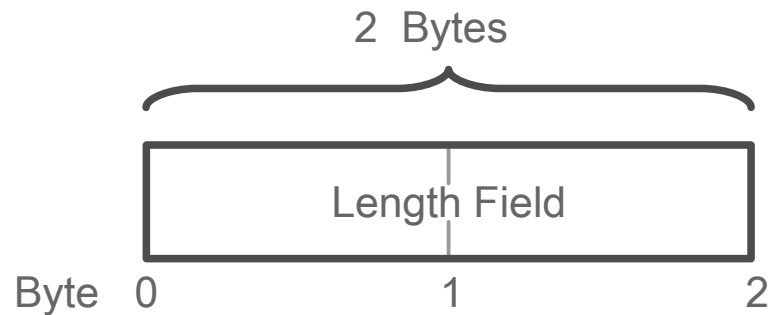




# ANGRY BIRDS & HALF-WORDS

## MOBILE & THE MAINFRAME

Geoff Pirie – IBM Hursley, UK. CICS Transaction Server

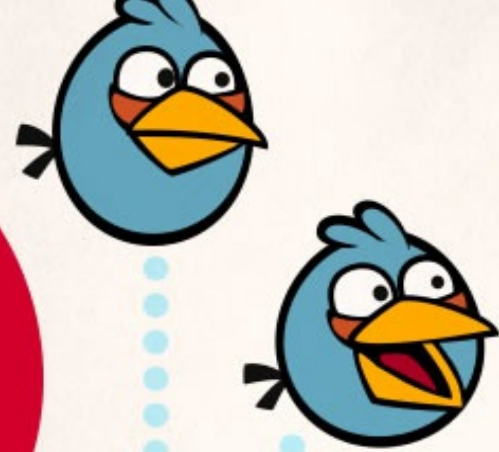


# ANGRY NEW YEAR

CHRISTMAS WEEK  
DECEMBER 22-29



**30**  
MILLION  
ANGRY BIRDS DOWNLOADS



NEW DEVICES  
ON CHRISTMAS DAY  
**17.4**  
MILLION\*

ANDROID + IOS  
TABLETS &  
SMARTPHONES

CHRISTMAS DAY

**8**

MILLION  
ANGRY BIRDS DOWNLOADS

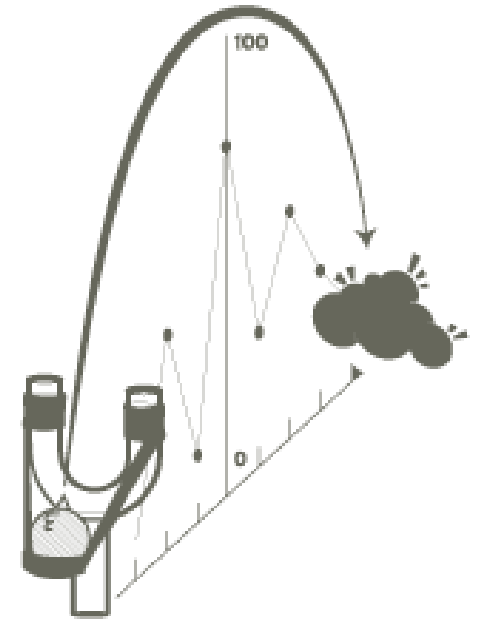
DECEMBER  
**25**



1 ANGRY BIRDS DOWNLOAD  
**FOR EVERY**  
*OTHER*  
**NEW DEVICE**

\*STATISTICS COURTESY OF FLURRY

Over **ONE**  
**BILLION**  
DOWNLOADS



**#1 in 79**  
COUNTRIES



**300**  
**MILLION**  
minutes played per day



**ONE**  
Wikipedia  
a month!



# The reason?

- 1) There are a lot of mobile devices
- 2) We spend a lot of time using those devices
- 3) We really hate green pigs! ;-)



THERE ARE CURRENTLY MORE THAN  
**1.038 BILLION**  
 SMARTPHONES IN USE



that's 1 out of every 6.7 people on the planet.

MOBILE USERS ARE  
**FIVE TIMES MORE**  
 LIKELY TO  
**ABANDON THE TASK**  
 IF THE SITE ISN'T OPTIMIZED  
 FOR MOBILE.

**79%**  
 WILL SEARCH  
 FOR ANOTHER SITE TO  
 COMPLETE THE TASK.

## MEDIA TABLET SALES

in 2012  
**118.9**  
 MILLION

by 2016  
**369.2**  
 MILLION  
 tablets we will be sold

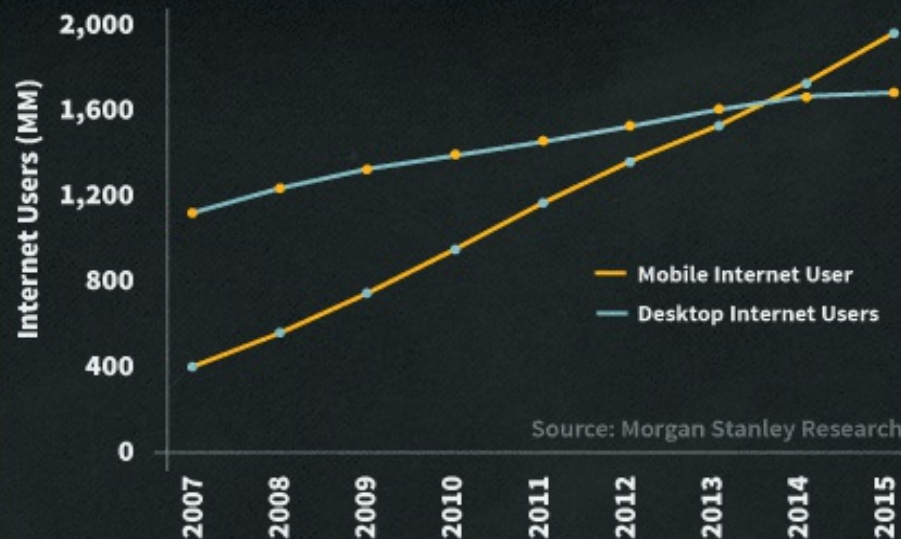
IN THE LAST 16 YEARS

97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14

**1 BILLION**  
 SMARTPHONES SOLD

THE NEXT  
 ONE BILLION  
 WILL BE SOLD  
 IN JUST THE  
 NEXT 2 YEARS

GLOBAL MOBILE VS. DESKTOP INTERNET USER PROJECTION, 2007 - 2015



Google estimates by 2013  
**MORE PEOPLE WILL USE**  
**MOBILE PHONES THAN**  
**DESKTOP PCS TO GO ONLINE.**





# Shopping / Commerce

## Global Stats



Gartner predicts that in 2016 there will be  
**448 MILLION**  
M-Payment users,

in a market worth  
**\$617 BILLION**



by 2015  
Global mobile  
transactions  
will grow to more than  
**\$1 TRILLION**

## Retailers



amazon.com  
to reach  
**\$4 BILLION**  
IN MOBILE SALES  
by end of 2012

In 2011  
**ebay**  
people purchased  
**\$5 BILLION**  
of goods using their  
MOBILE PHONES.

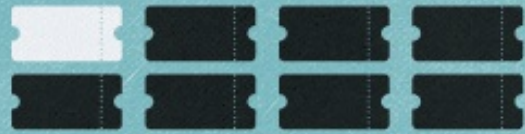
PayPal  
estimates  
**\$7 BILLION**  
IN MOBILE SALES  
in 2012

in 2012, this rose to  
**\$10 BILLION**



# Going Places:

MOBILE TICKETS (M-TICKETING) FOR TRAVEL AND ENTERTAINMENT



in 2015 **1 in 8**

**MOBILE SUBSCRIBERS WILL USE M-TICKETING**

for airline, rail and bus travel, festivals, cinemas and sports events.

By 2015 over

**750 MILLION**

users will either have a ticket **delivered to their mobile phone** or buy a ticket with their phone



compared to

**230 MILLION**

today.

Ticket delivery will be by SMS, bar codes, mobile web, smartphone apps or NFC.

# Healthcare:

The mobile health technology market including devices, applications, and services

**IS EXPECTED TO EXCEED \$8 BILLION**

by 2018

**70%**

of available healthcare apps are **consumer focused.**



**30%**

are designed for **medical professionals**

# Insurance:

Only

**22%**

of insurers have a **mobile quoting app**



# Financial Services:

In 2012

**47 MILLION**

Americans used

**MOBILE BANKING**

by next year, more than

**61 MILLION**

Americans will use mobile banking

**MOBILE BANKING**

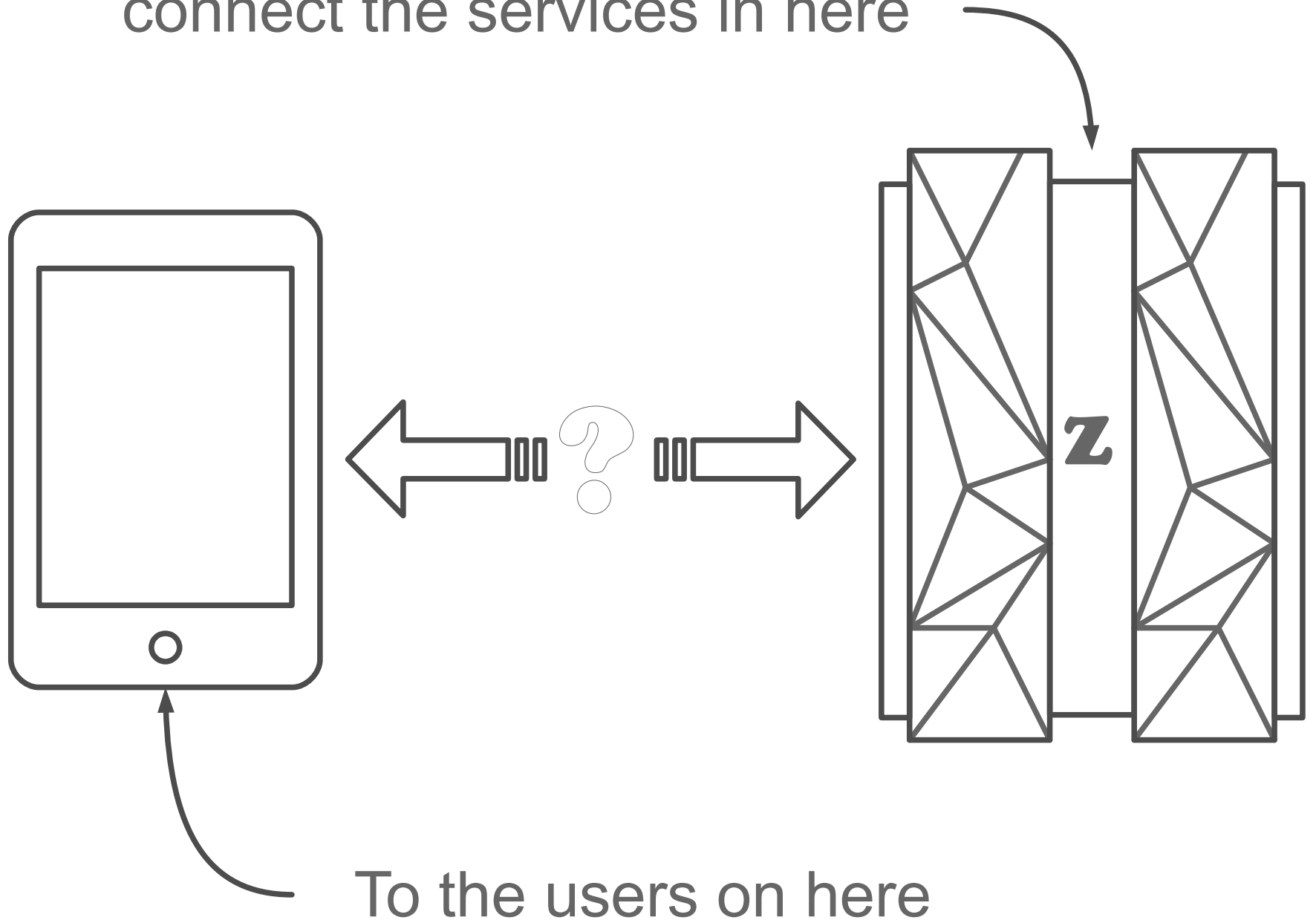
users in the U.S. in the next will

**DOUBLE** in the next **5 YEARS**

and reach **108 MILLION**

by 2017.

So we need to  
connect the services in here

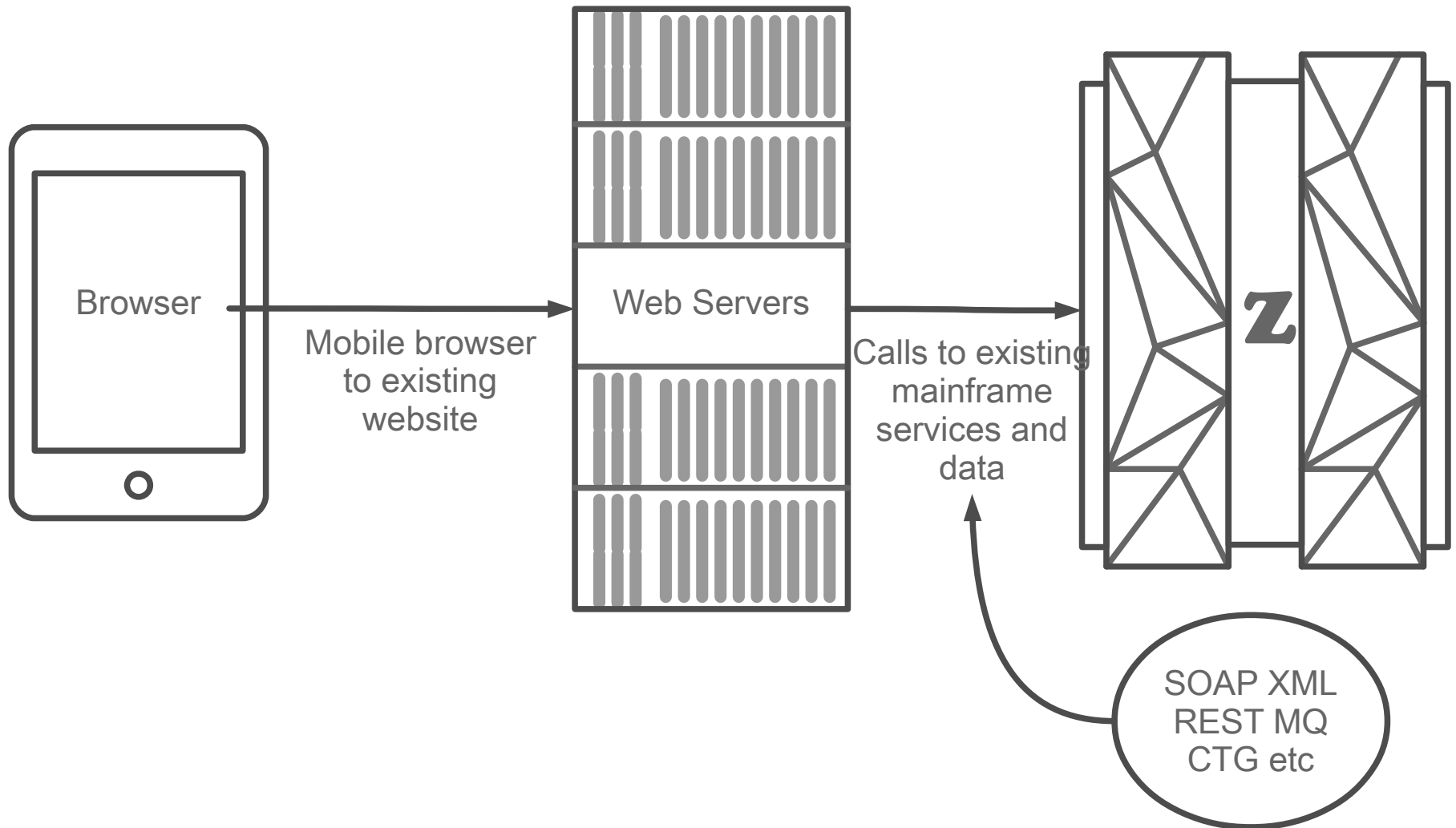


To the users on here



# Easy!

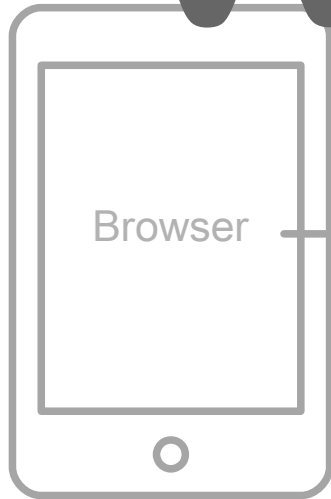
## Mobile is just like the web right?



Easy!

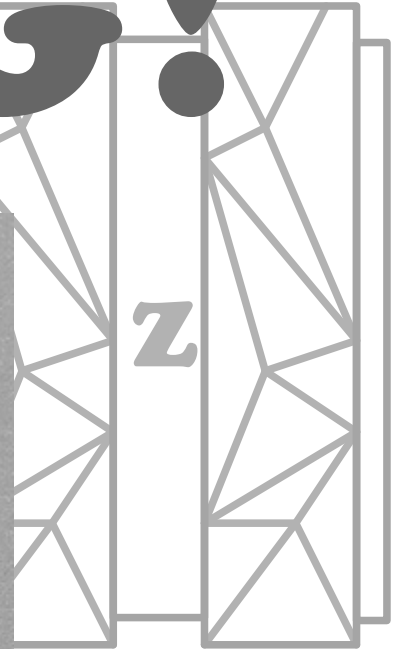
Mobile is just like the web right?

**WRONG!**

A dark grey tablet icon with a white home button. The screen displays two statistics in white text. The first statistic is in all caps: "MOBILE USERS ARE FIVE TIMES MORE LIKELY TO ABANDON THE TASK IF THE SITE ISN'T OPTIMIZED FOR MOBILE." The second statistic features a large "79%" followed by "WILL SEARCH FOR ANOTHER SITE TO COMPLETE THE TASK." in all caps.

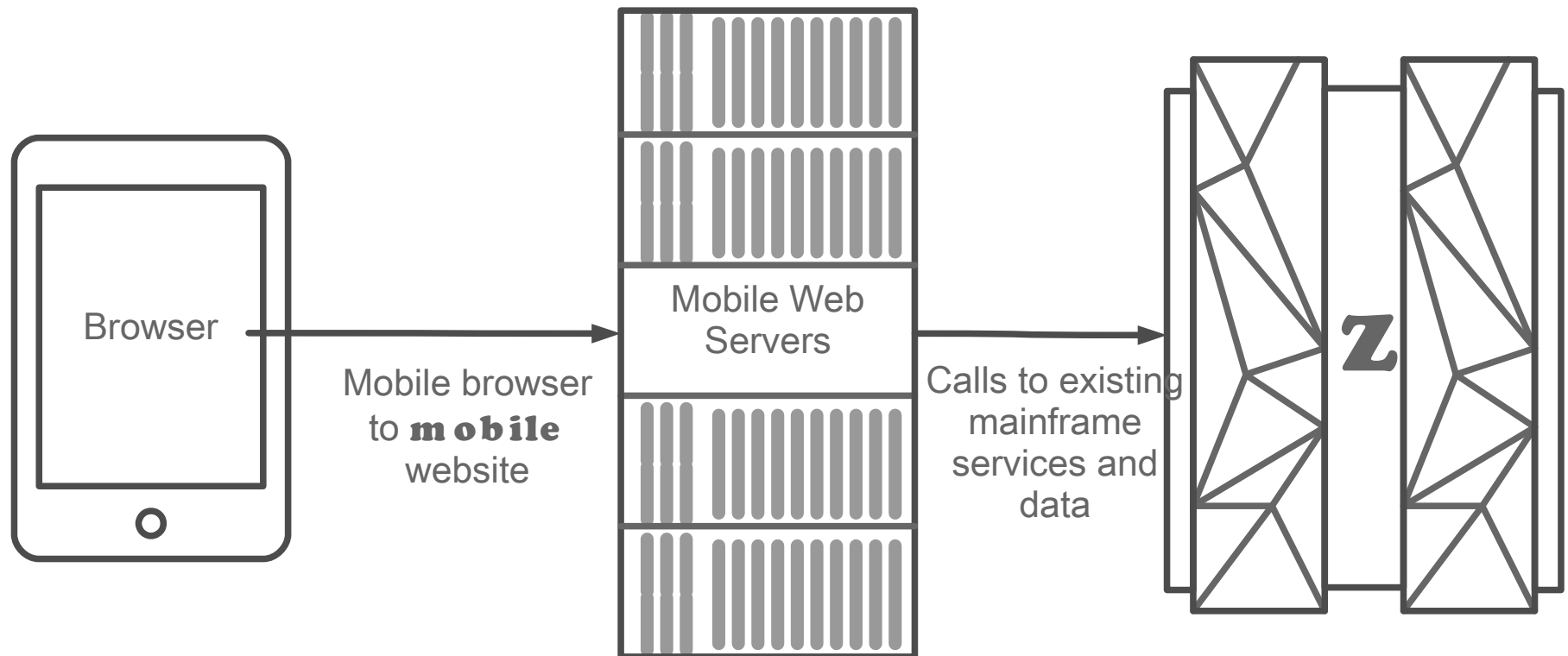
MOBILE USERS ARE  
FIVE TIMES MORE  
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IF THE SITE ISN'T OPTIMIZED  
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**79%**  
WILL SEARCH  
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COMPLETE THE TASK.

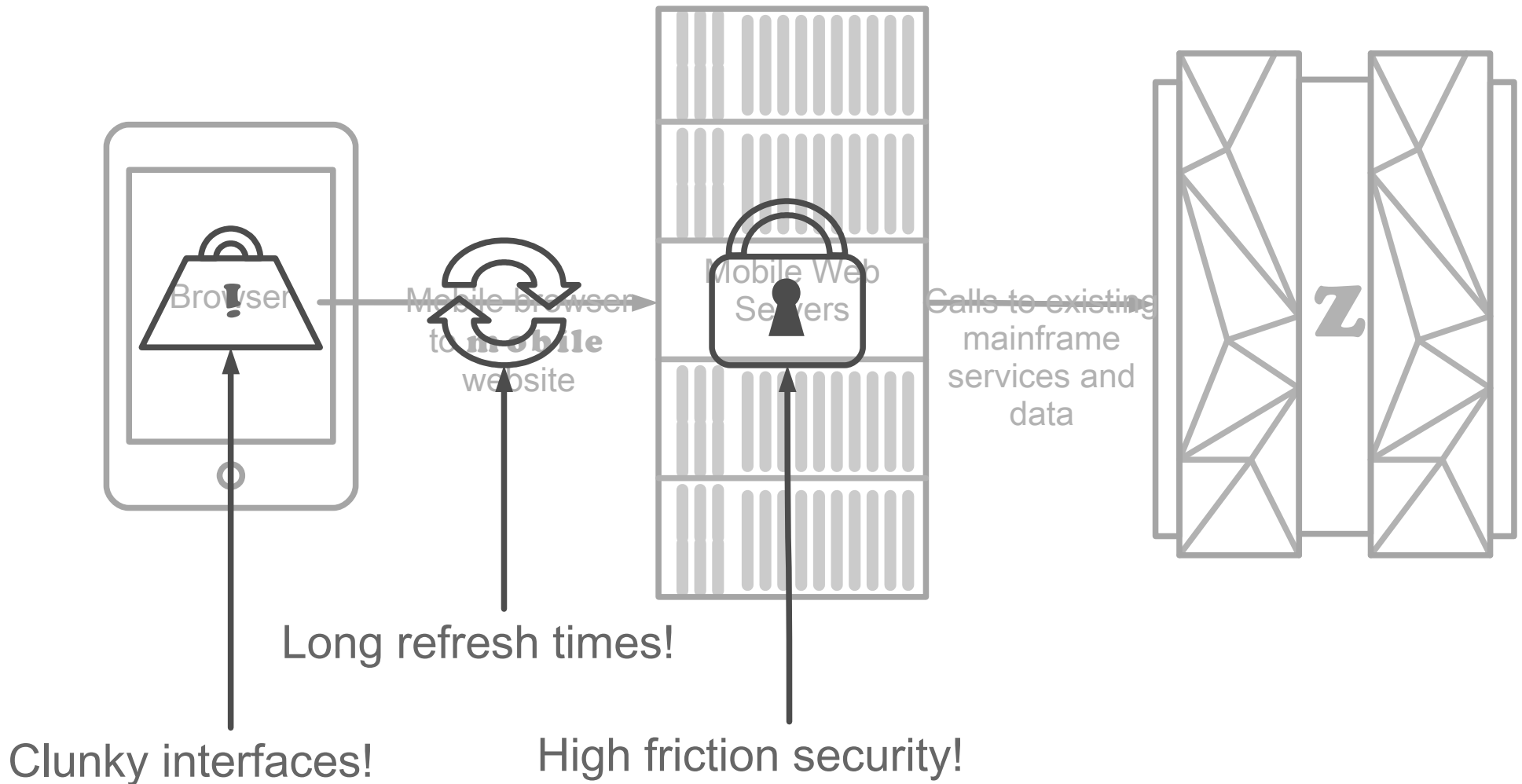




# Ok... Re-style for a mobile website

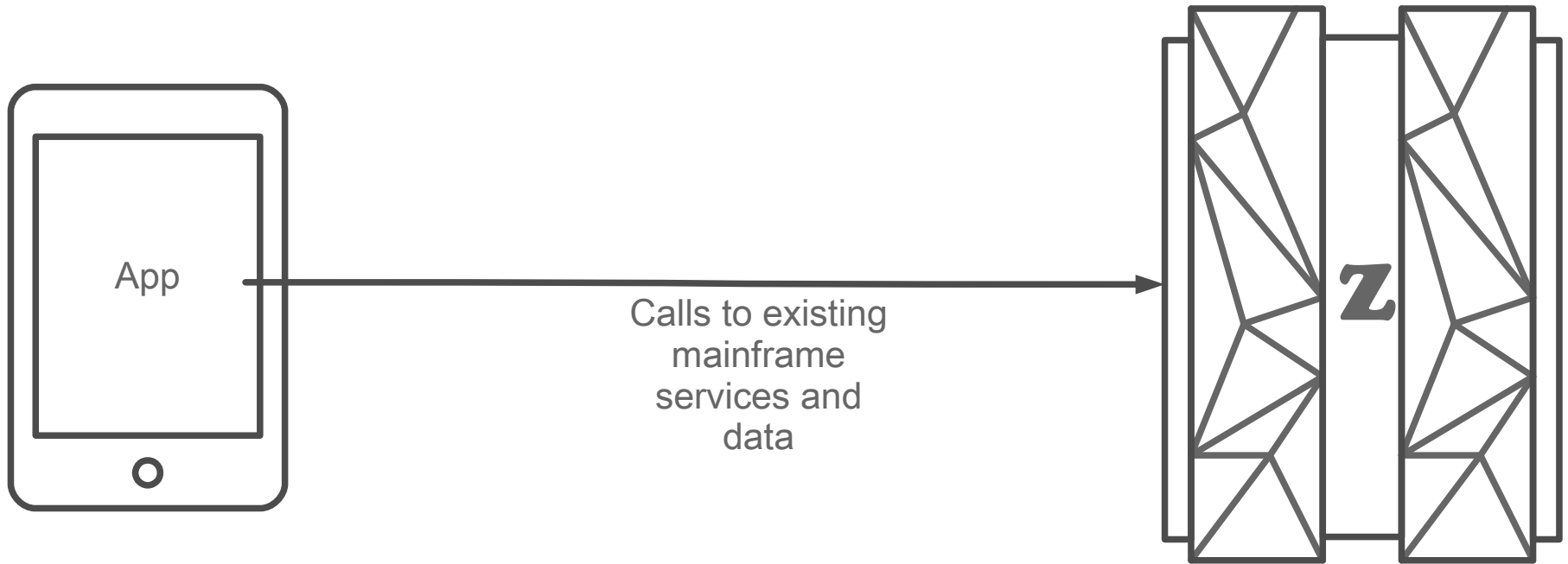


# Ok... Re-style for a mobile website **Better...** **But not quite as good as an App!**



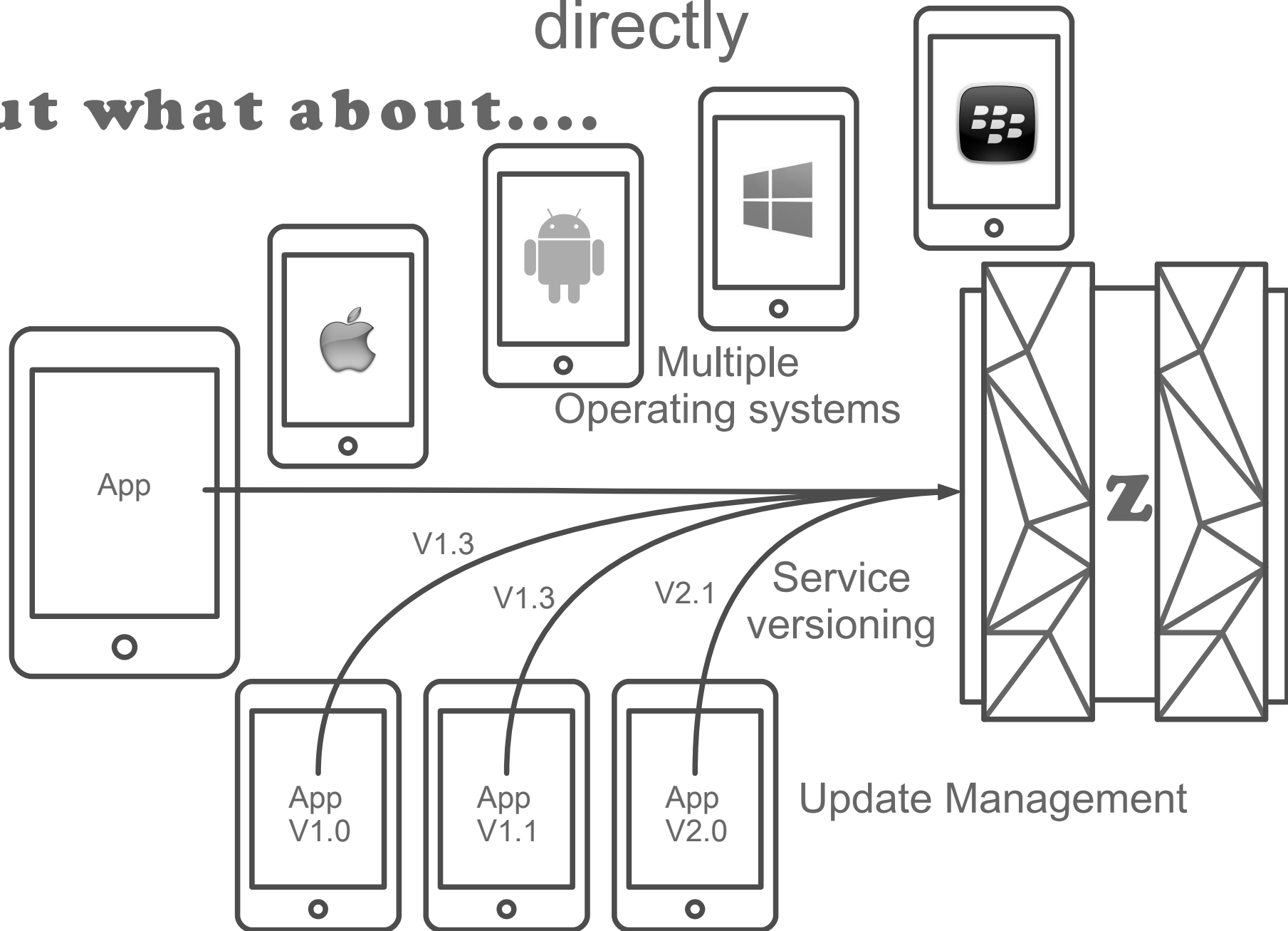


So... Lets write an app that calls the services directly



So... Lets write an app that calls the services directly

**But what about....**

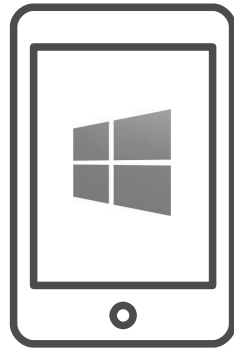
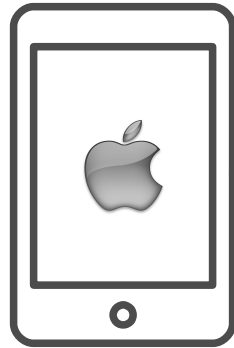




# We need a mobile app platform...

## Hybrid Apps

Write once,  
run anywhere!



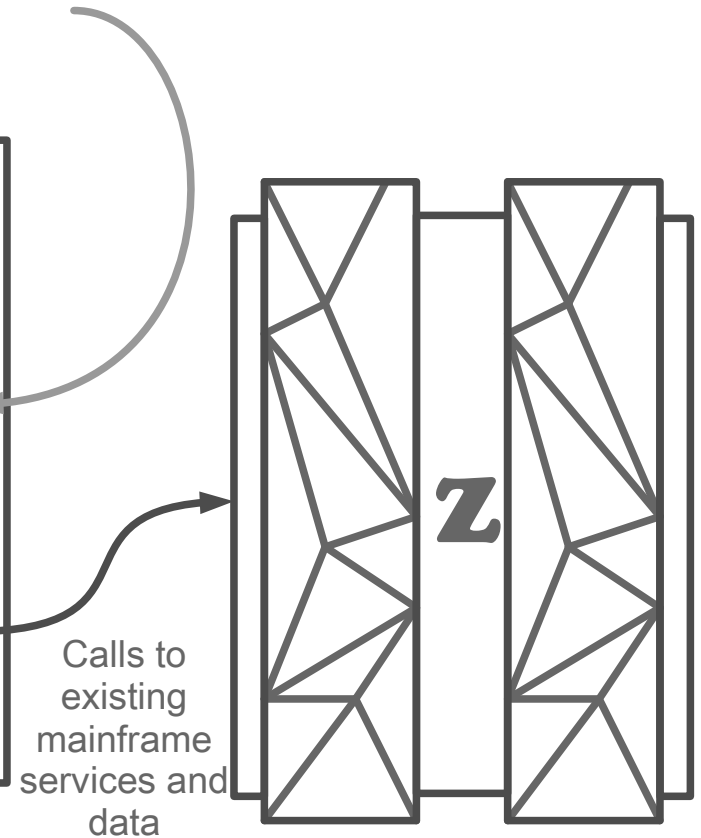
## Version management,

Disable old versions  
Upgrade certain platforms  
Mandatory Updates

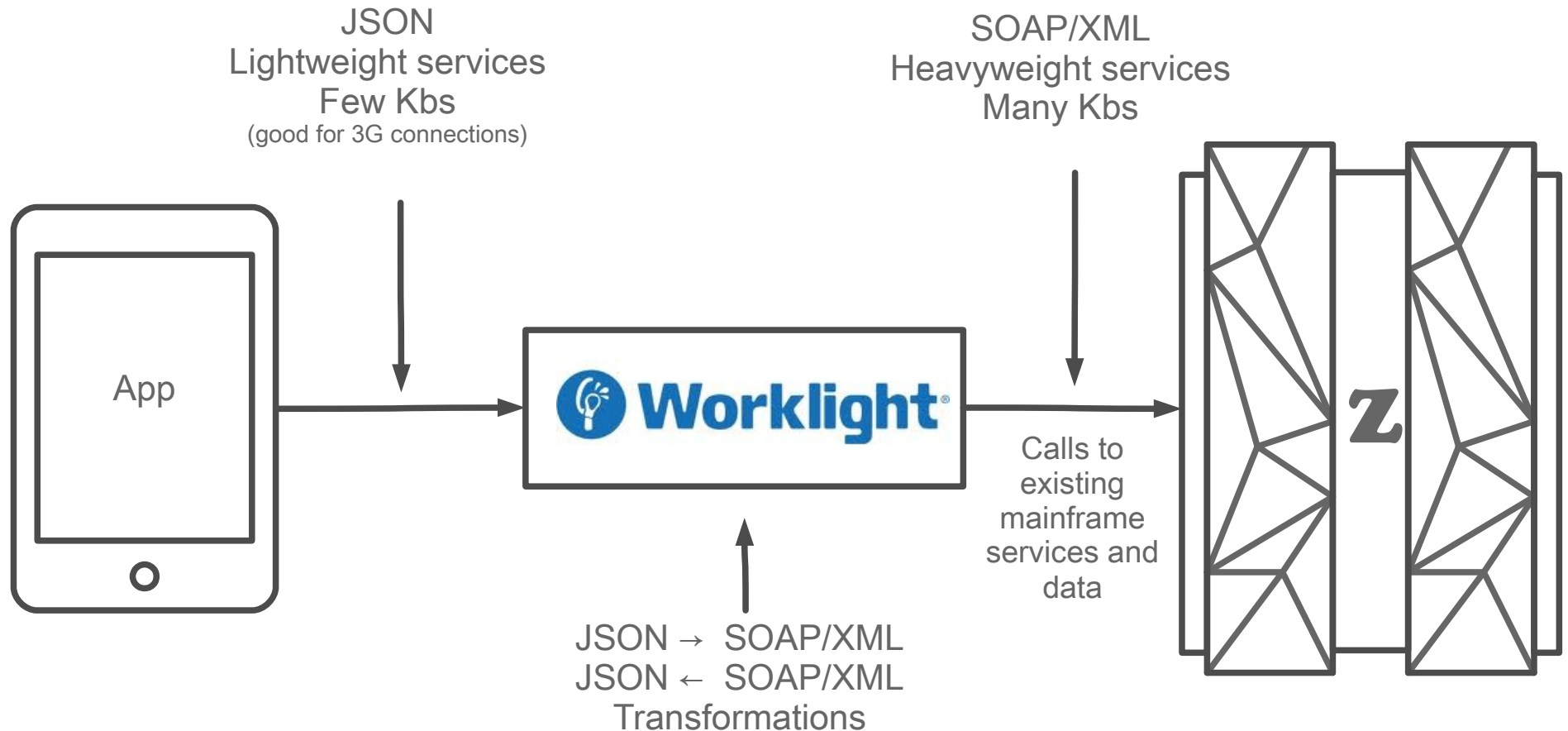


## Service management

Shield app from enterprise changes  
Manage service versions  
Simplify complex interfaces

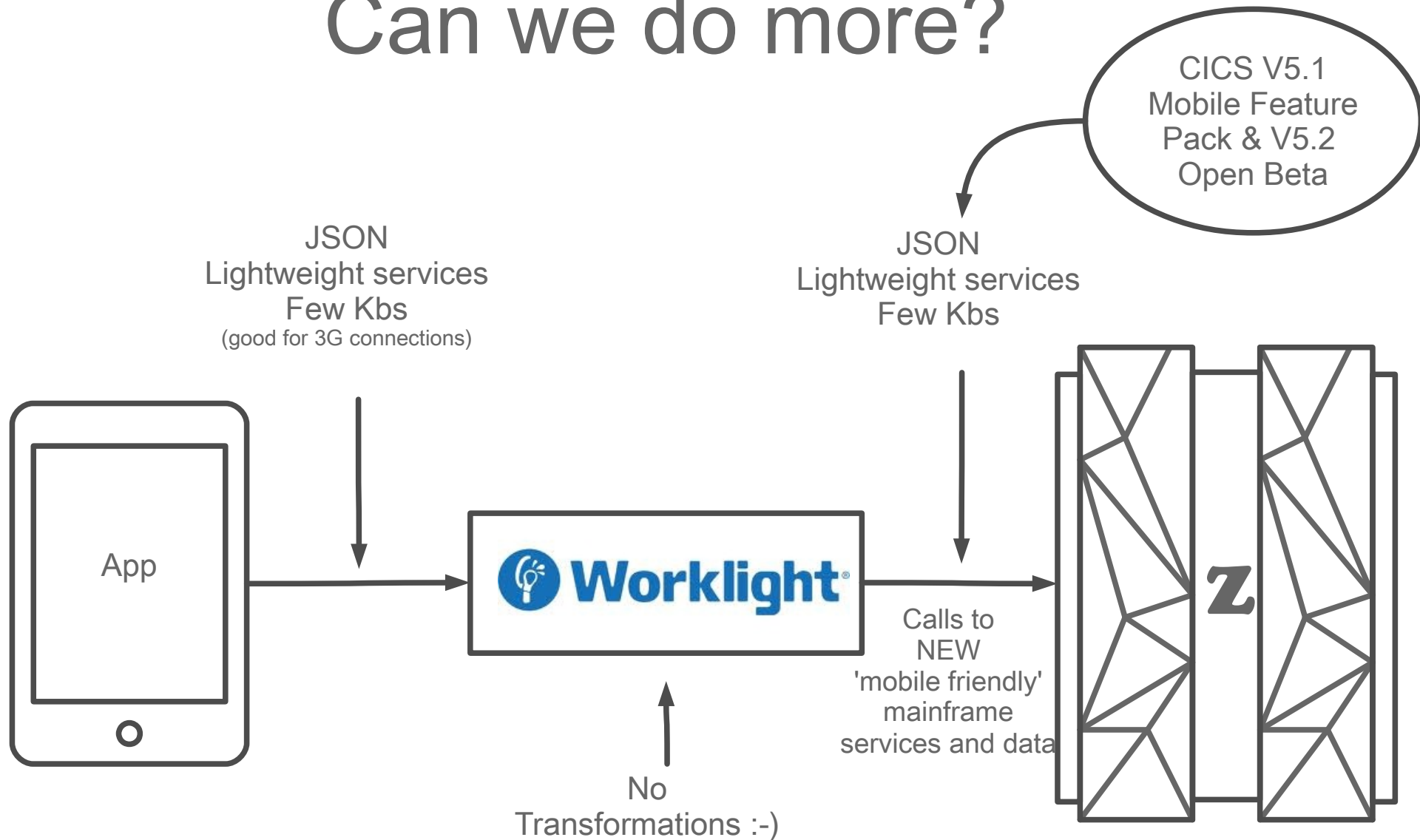


# Can we do more?



Takes time and CPU :- (

# Can we do more?



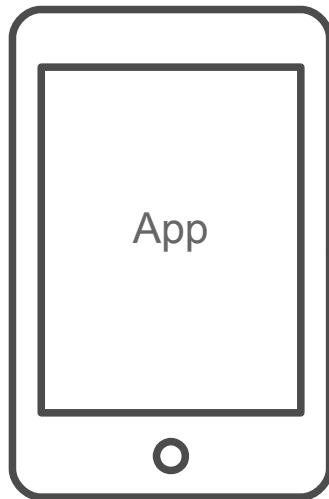
A better way...

# Can we do more?

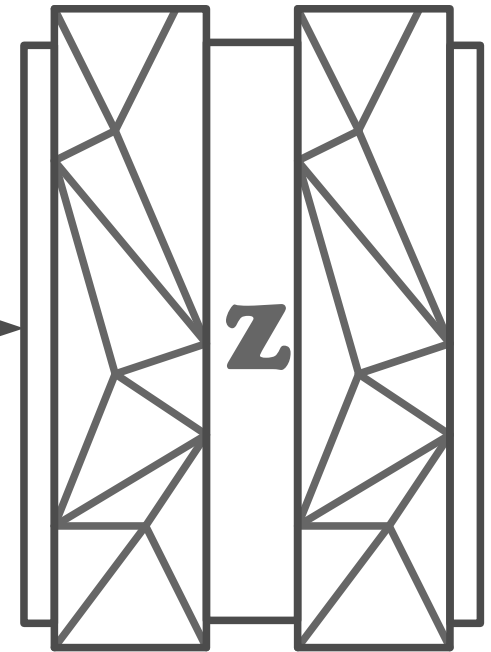
Designed for Mobile,  
Used by Facebook!



MQTT  
Lightweight services  
Few Kbs  
(good for 3G connections)



Calls to  
NEW  
'mobile friendly'  
mainframe  
services and data



Or something different...



So, you can make  
'mobile friendly' services, but...



...the app team want them  
yesterday!

# Improve your processes!

- Incremental delivery with **agile principles**



Use project management tools like RTC to track work!

- Faster delivery with **cloud style deployment**



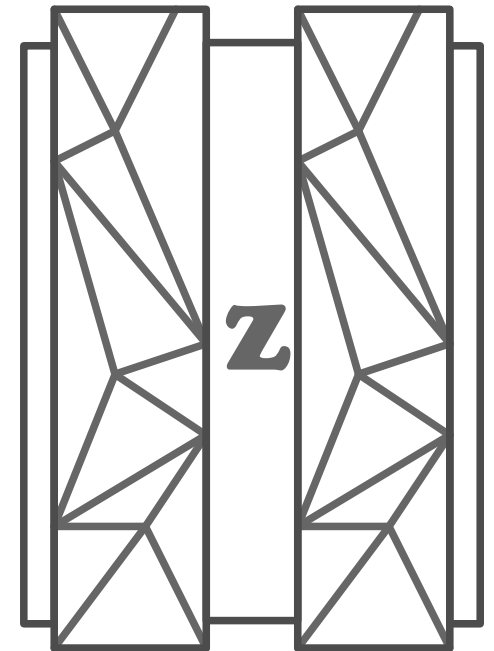
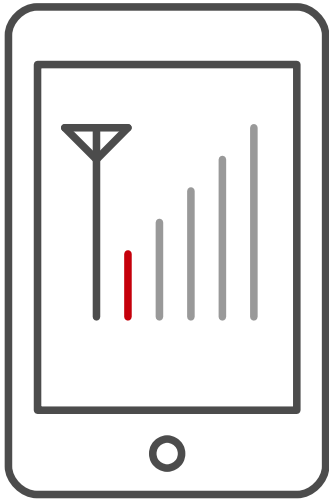
Use the App and Platform feature NEW in CICS V5.1

- Reduce risk with **change management**

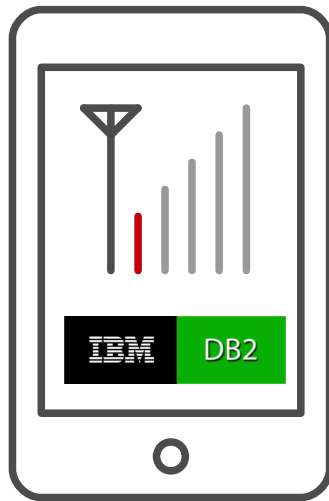


Use tools like CICS Configuration Manager!

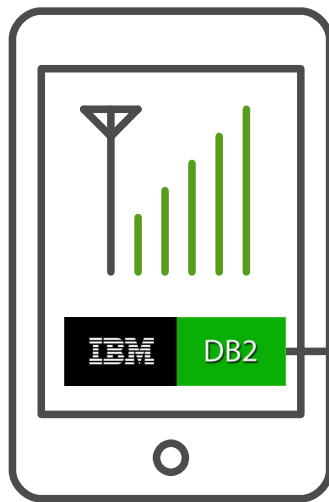
# What if the user has no signal?



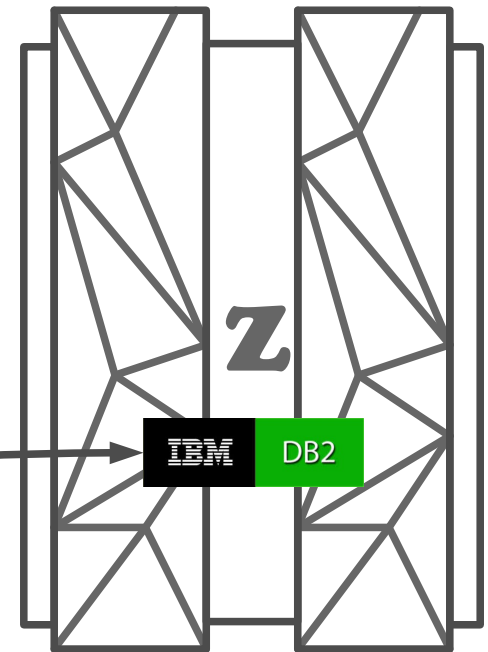
# Use IBM Mobile Database to sync offline changes to DB2!



User make changes offline...

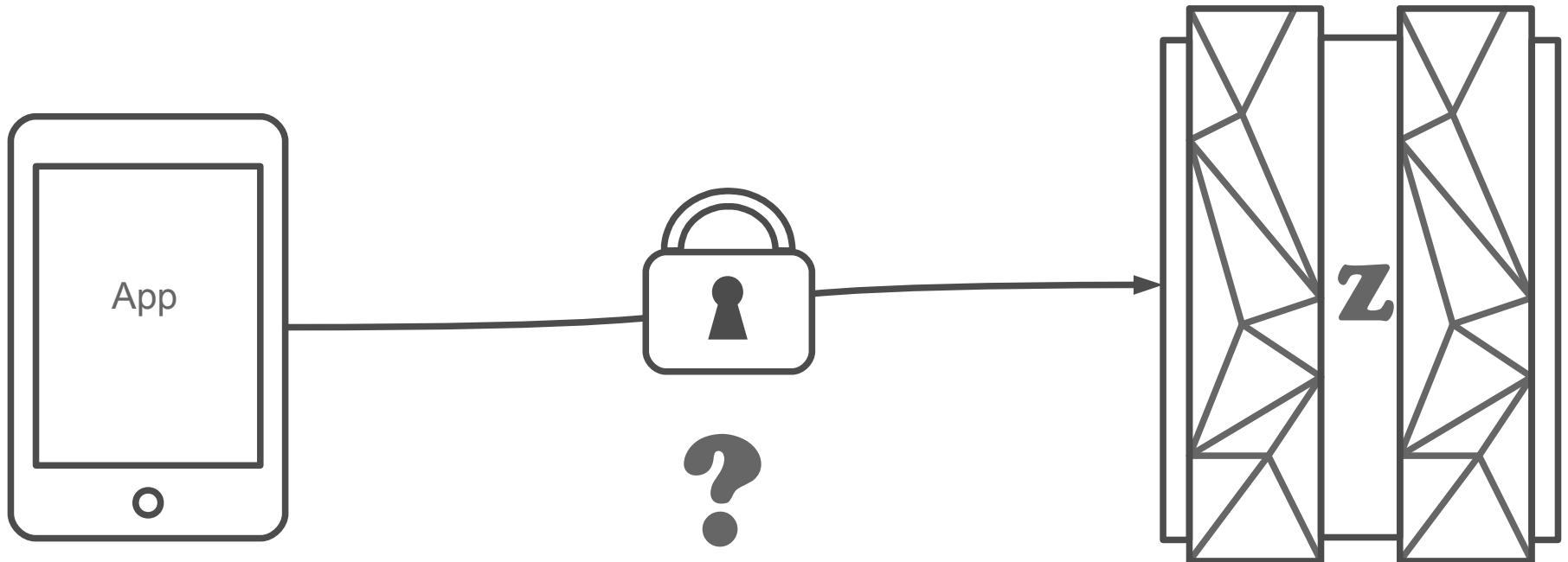


IBM Mobile Database automatically syncs changes when they next get signal!

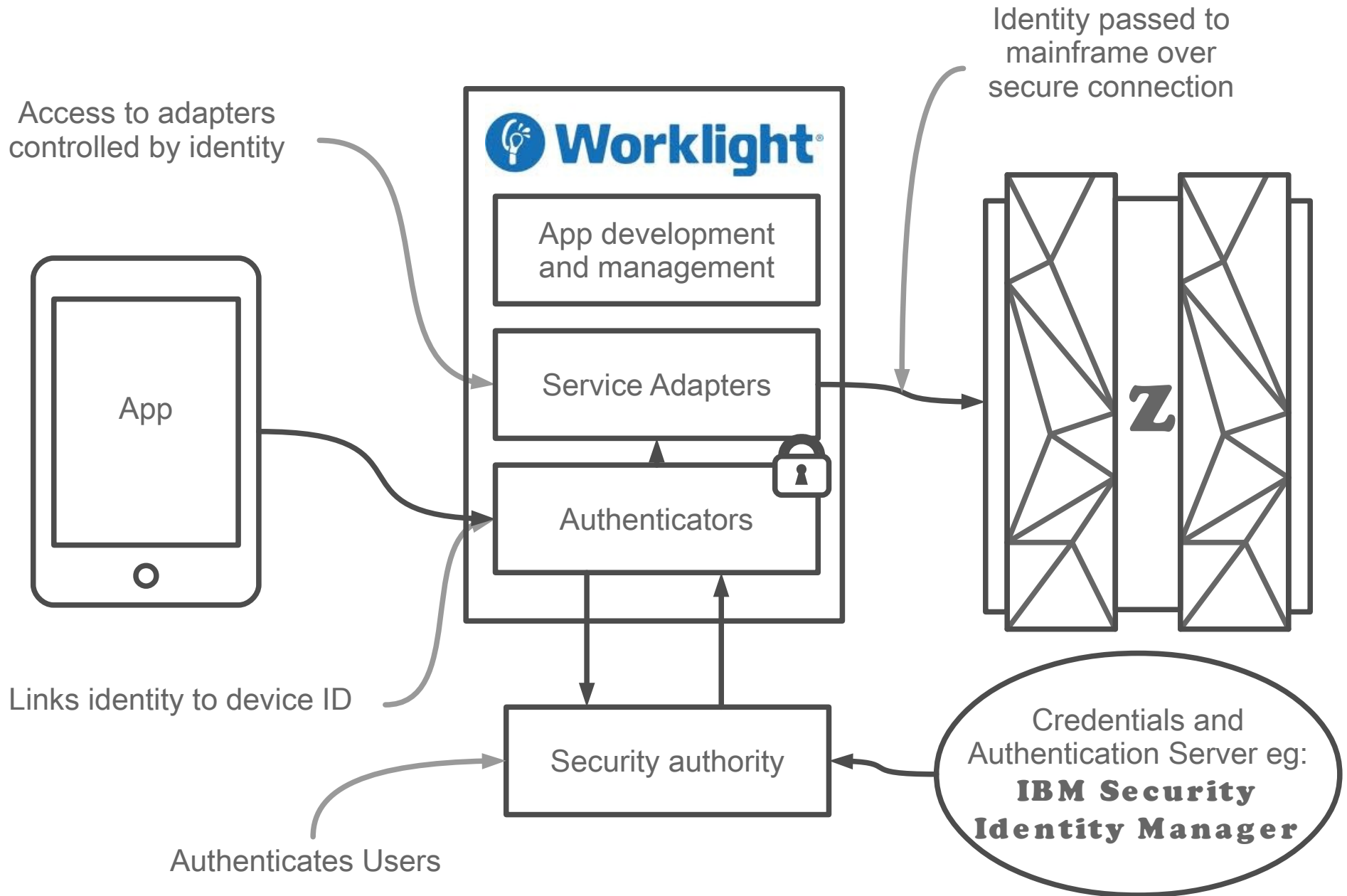




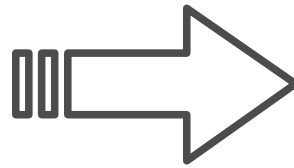
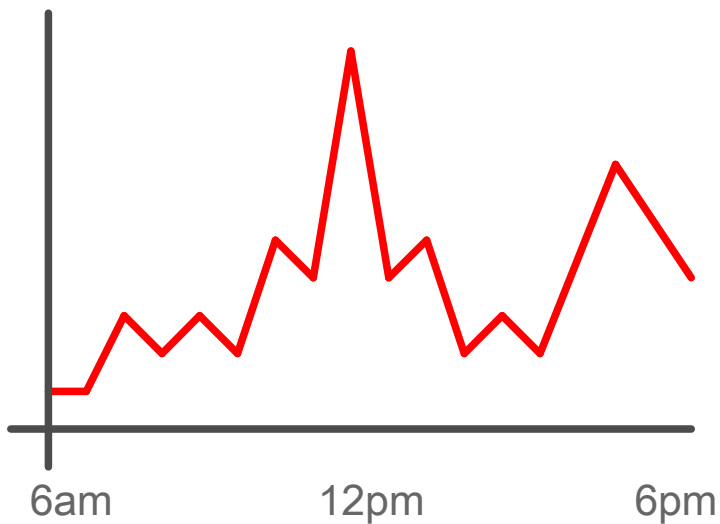
# What about security?



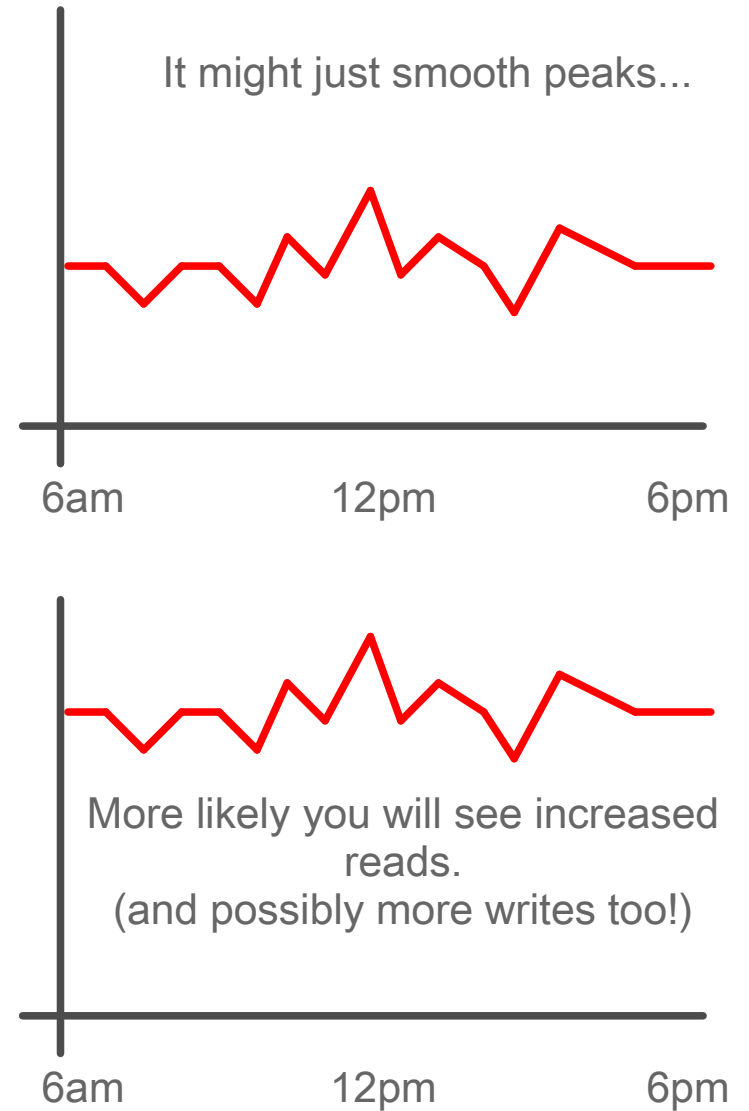
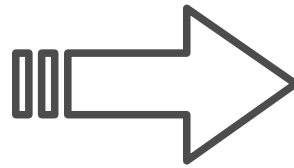
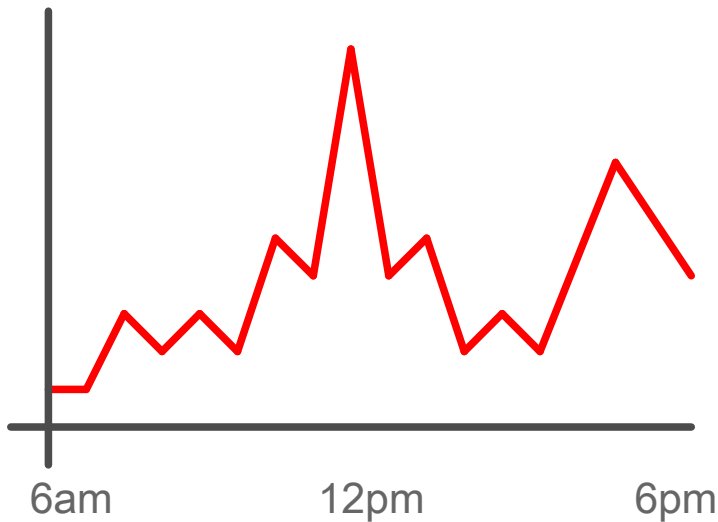
# Your app platform should manage it!



# But how will this affect my workload?

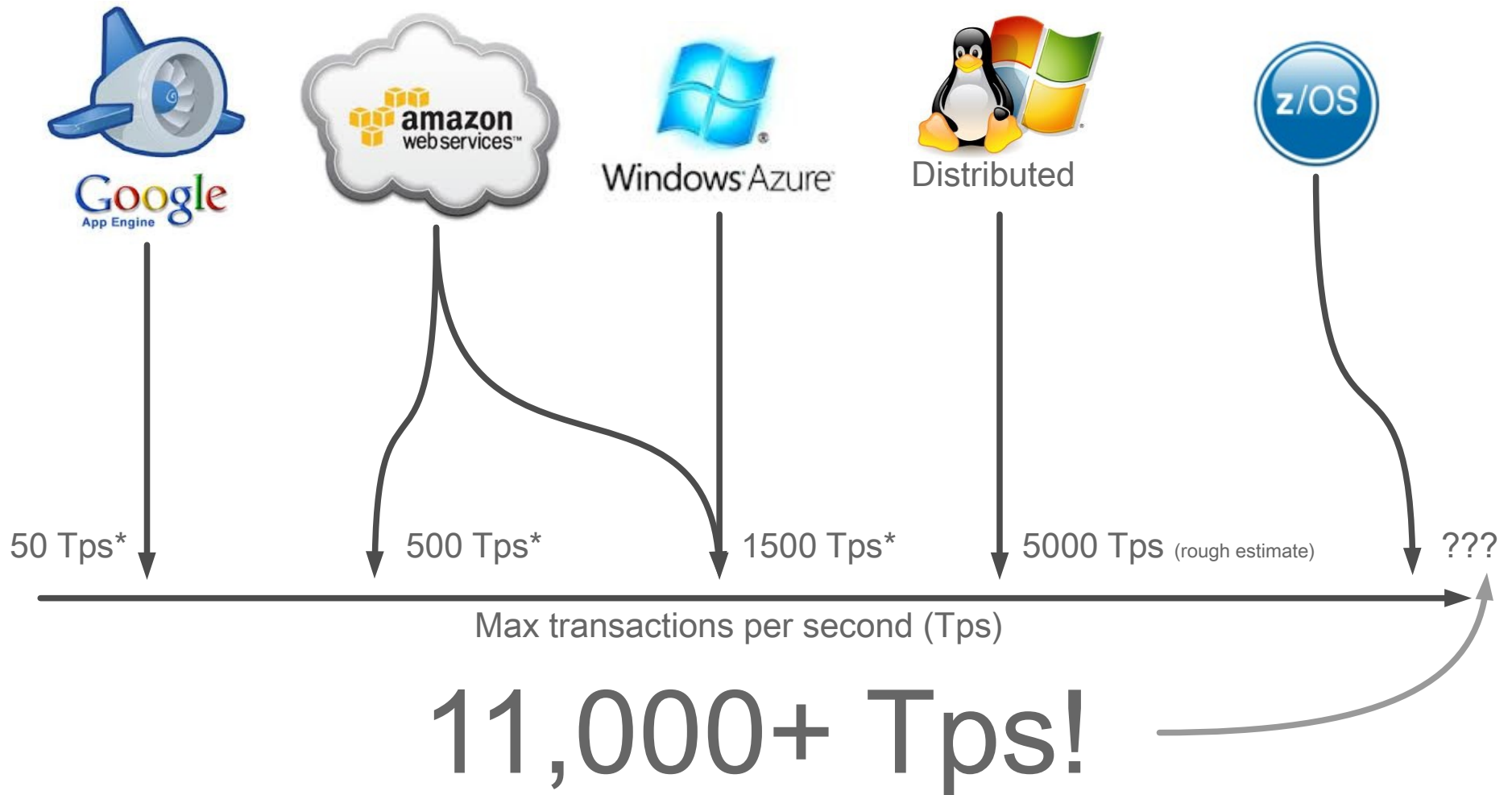


# It depends on your business...



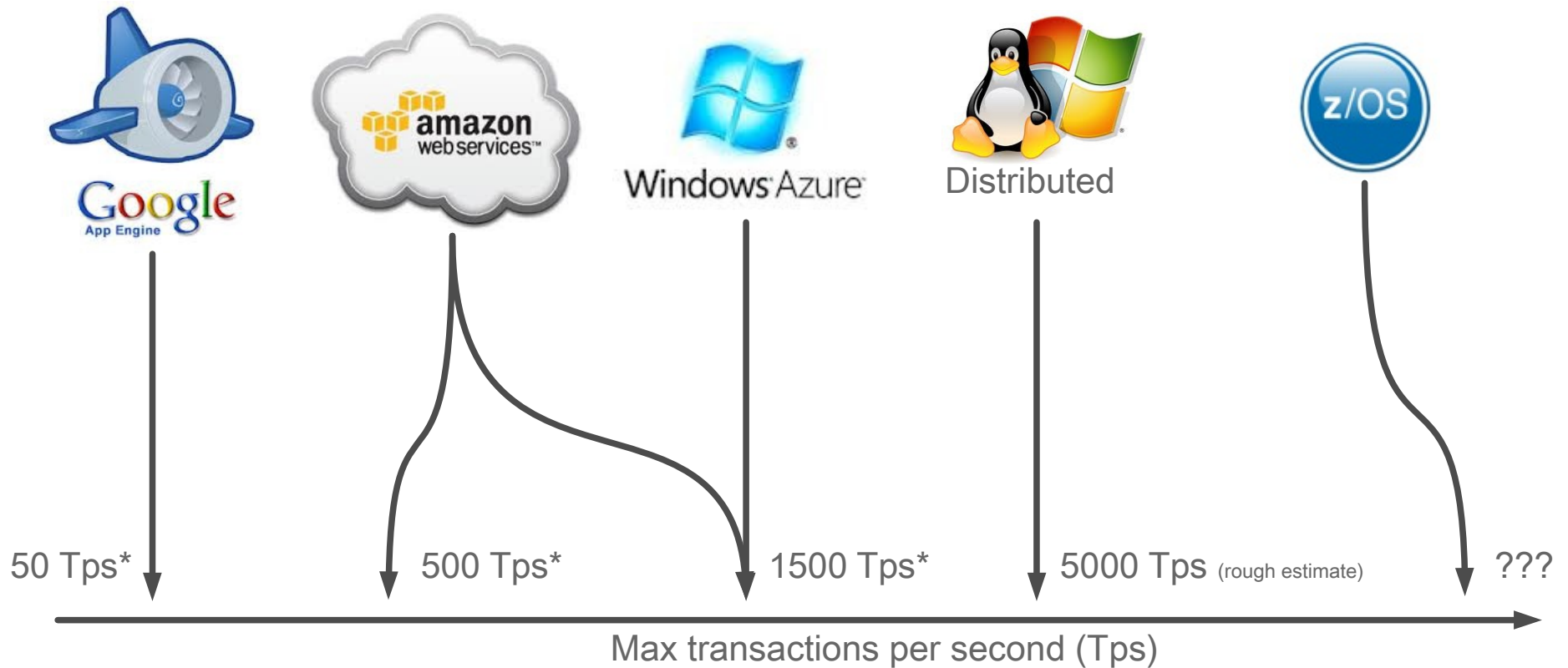


# Don't worry, the mainframe can scale!



\* Data from "An Evaluation of Alternative Architectures for Transaction Processing in the Cloud", 2010, D Kossmann, T Kraska, S Loesing

# Don't worry, the mainframe can scale!

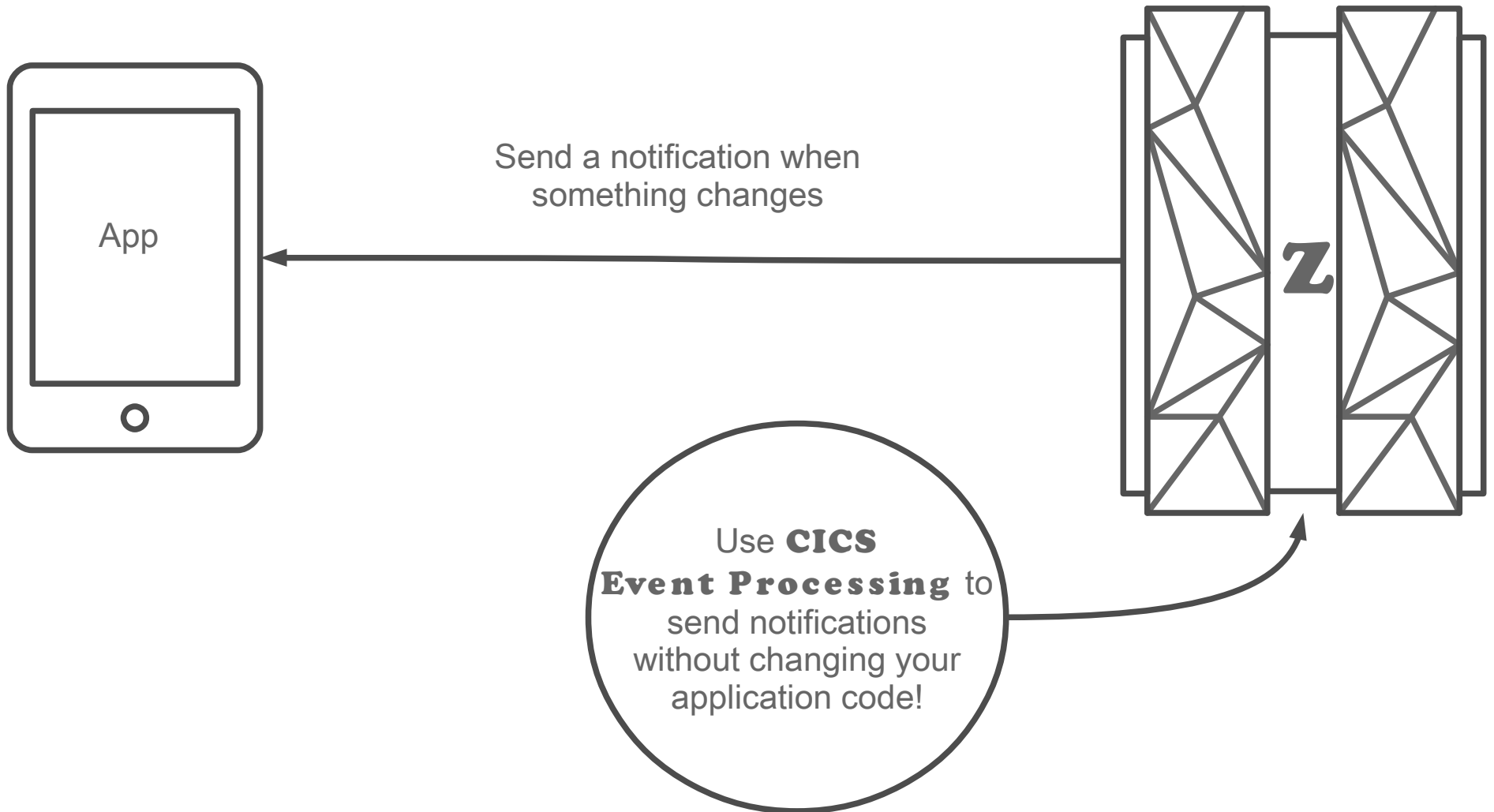


\* Data from "An Evaluation of Alternative Architectures for Transaction Processing in the Cloud", 2010, D Kossmann, T Kraska, S Loesing

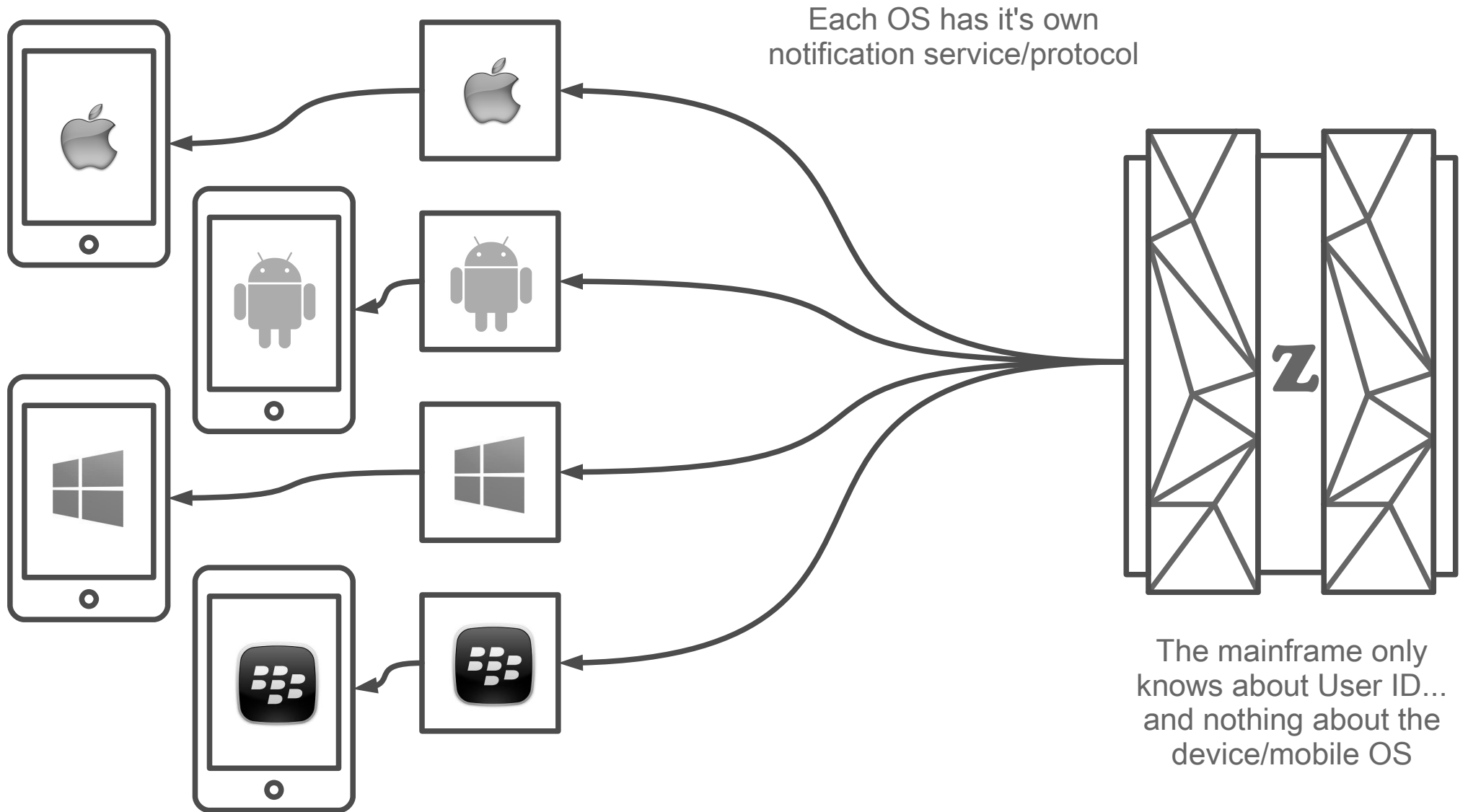
# How can we reduce mobile workload?

- Most requests from mobiles are 'reads'
- Mainly from people checking if things have changed
- We would get less 'reads' if we told people when things change...

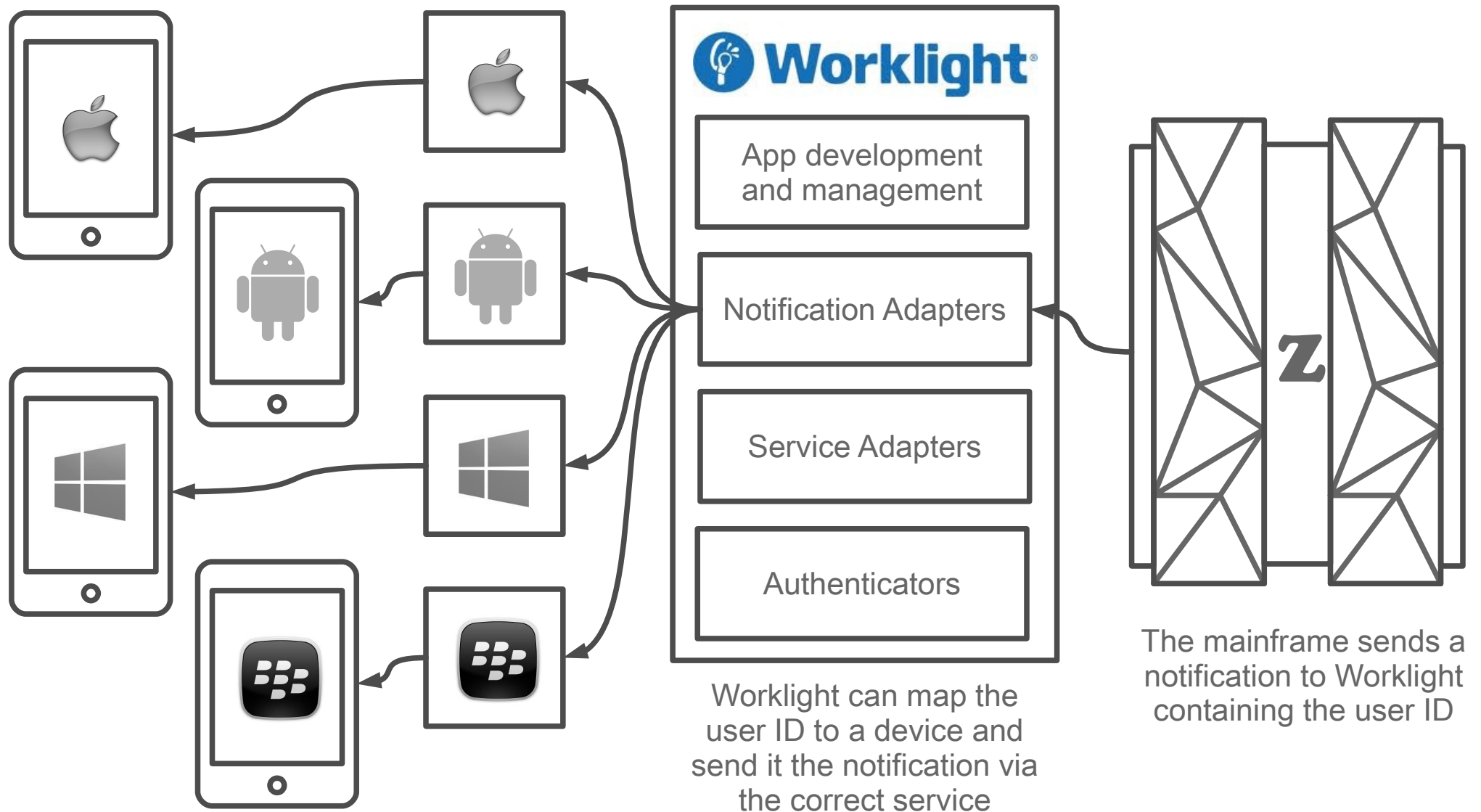
# We need notifications!



# It's not quite so simple...



# Once again it's a job for the app platform!



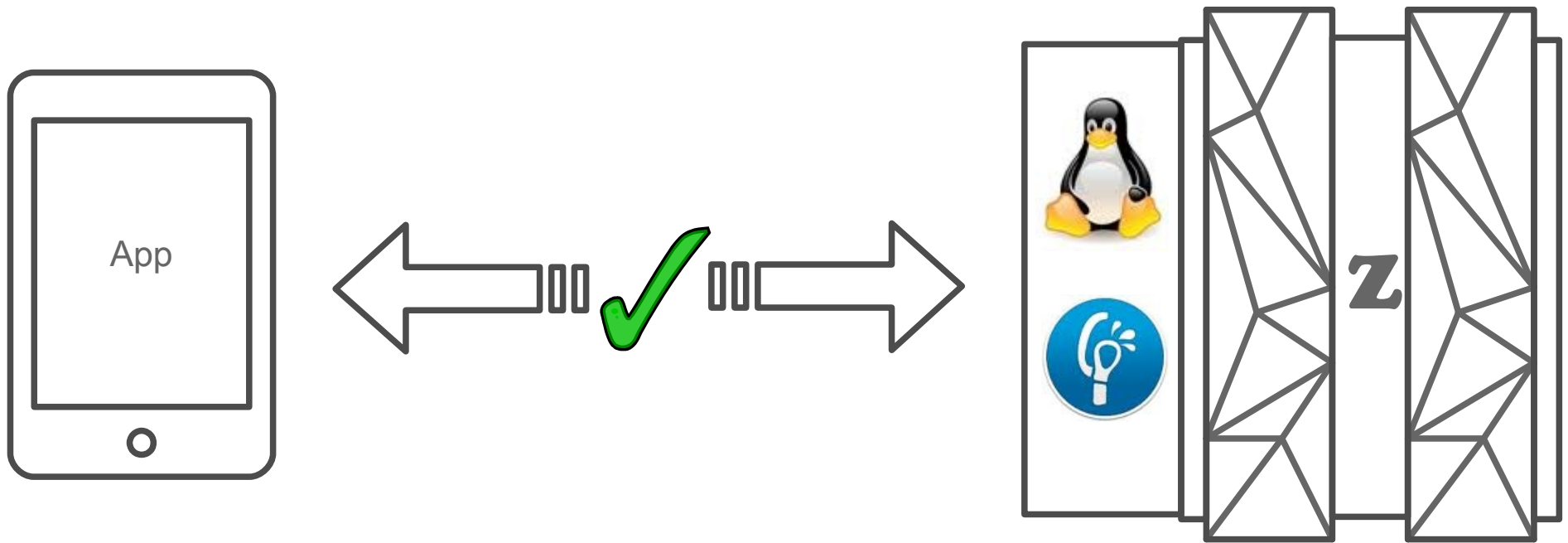


# Do I have to buy new servers to run Worklight?

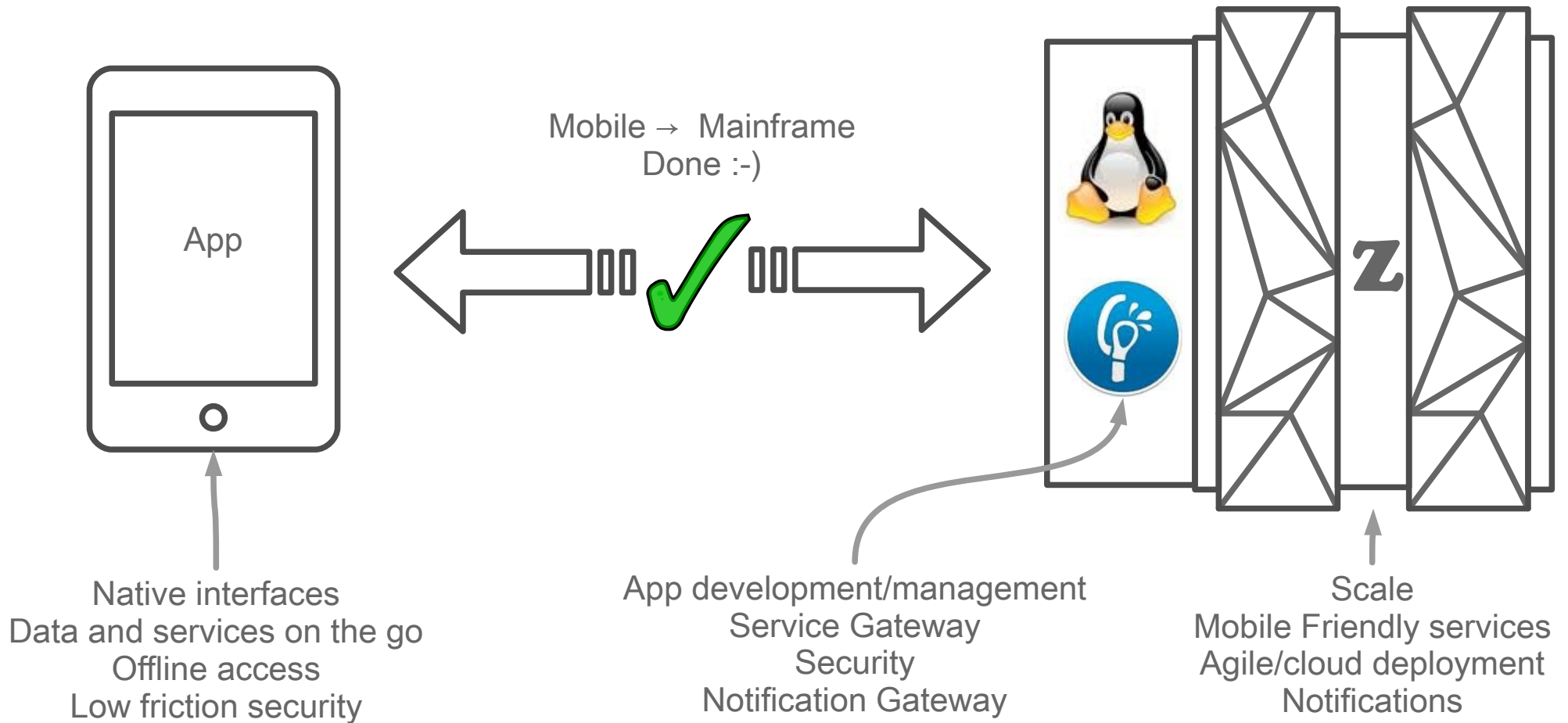


# No!

## Worklight will run on zLinux!

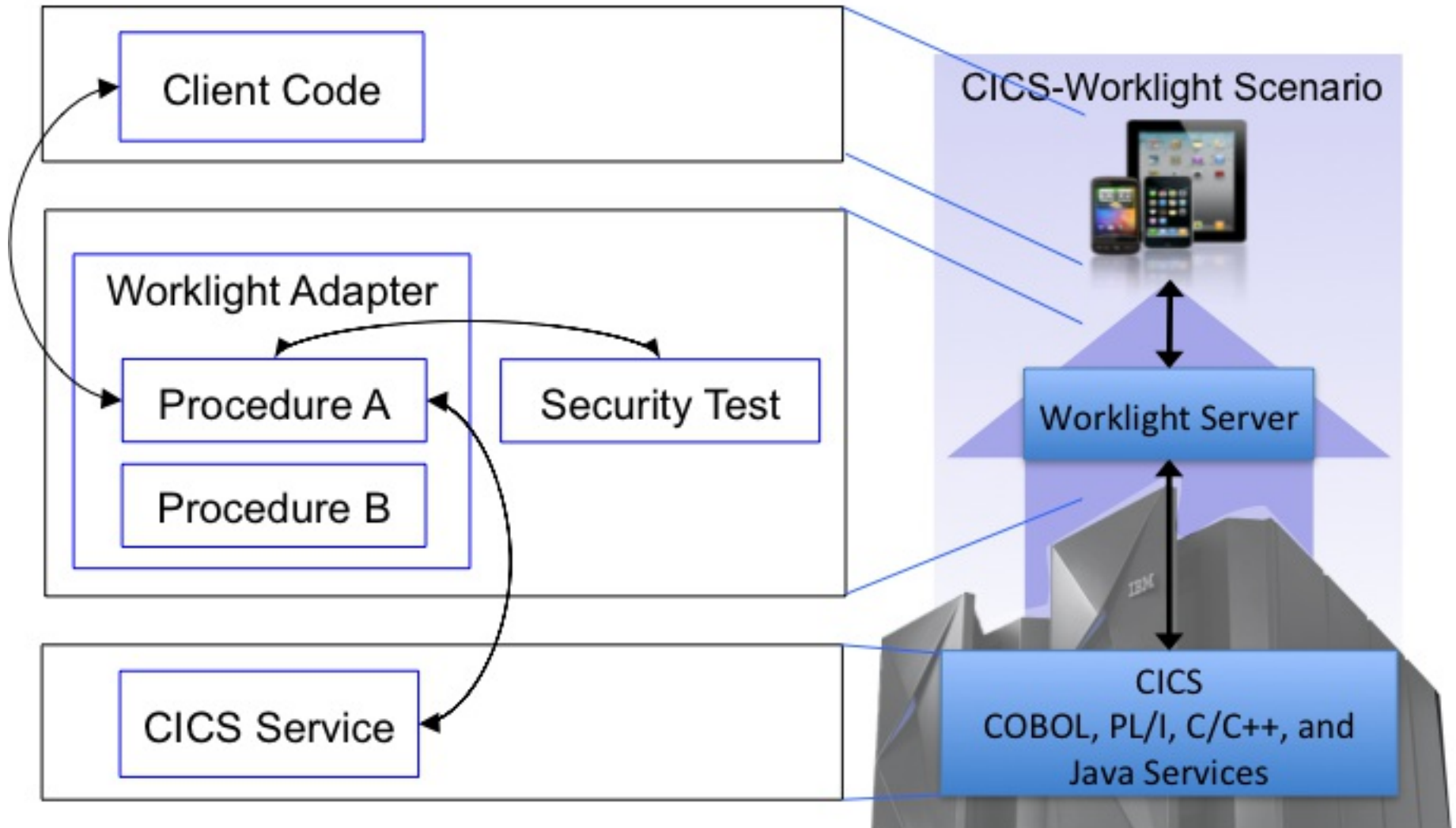


# And we're done!

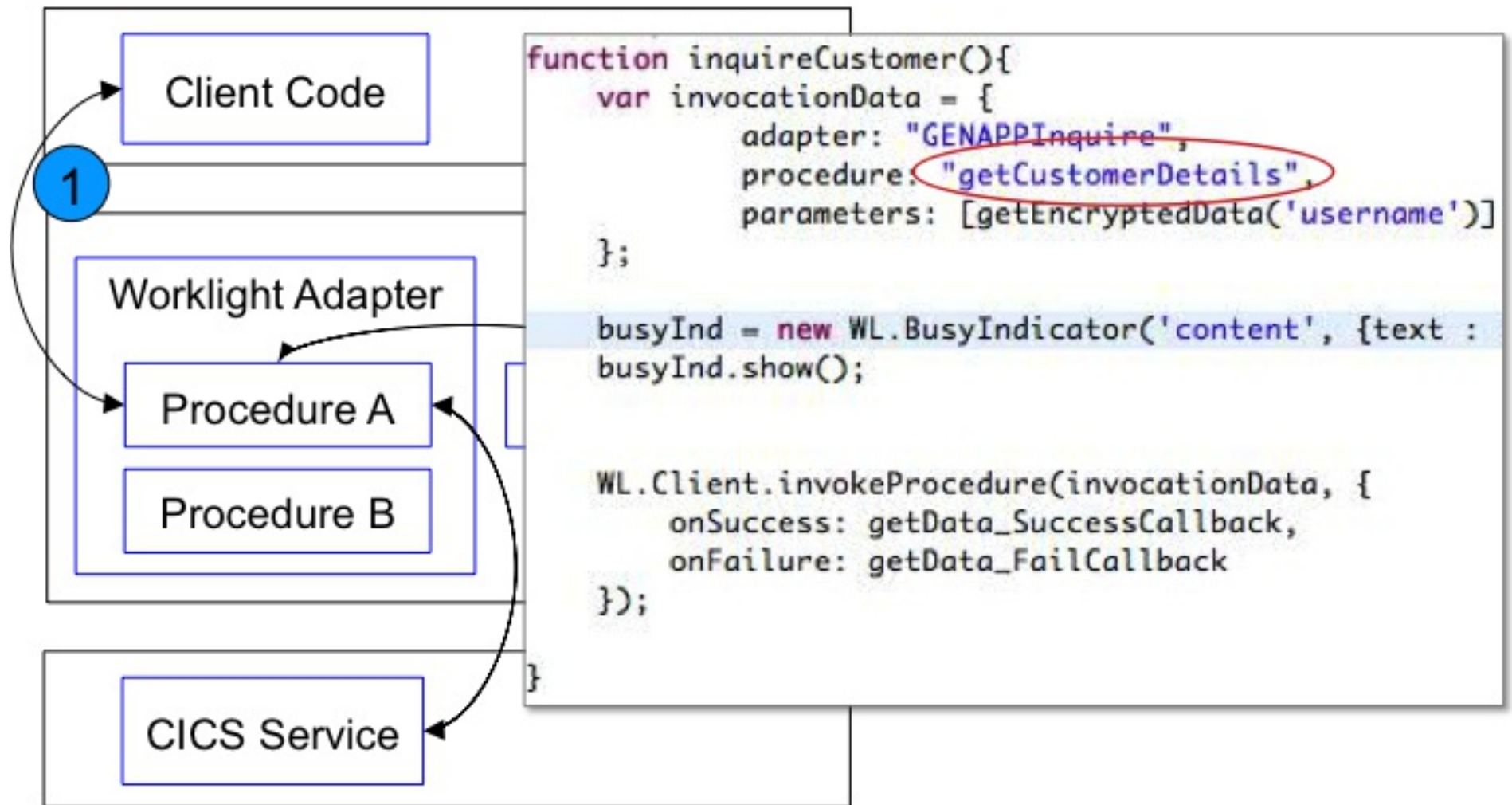


# Example of connecting a mobile to CICS services

# Worklight Components – basic flow

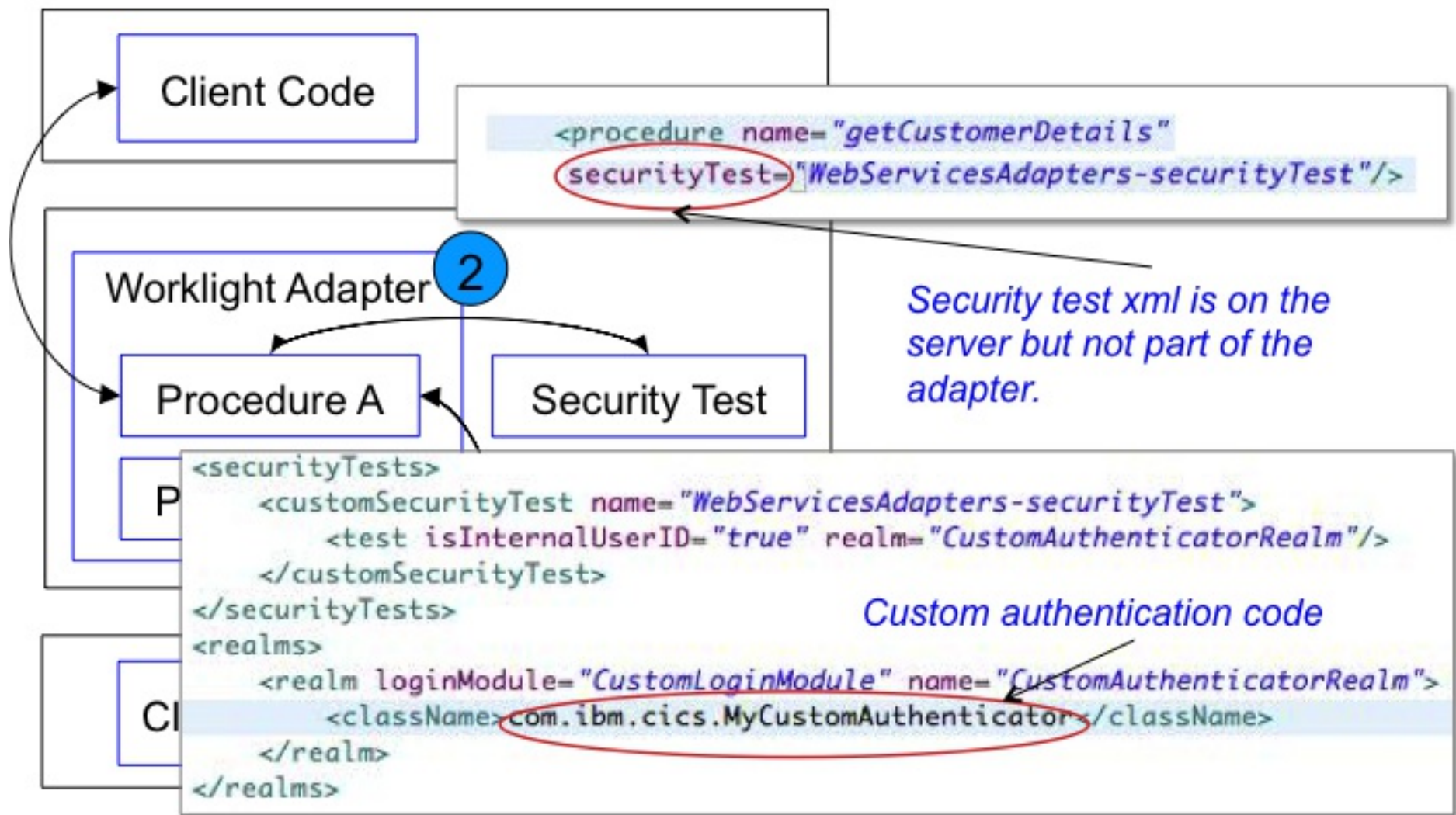


## Worklight Components – Client call

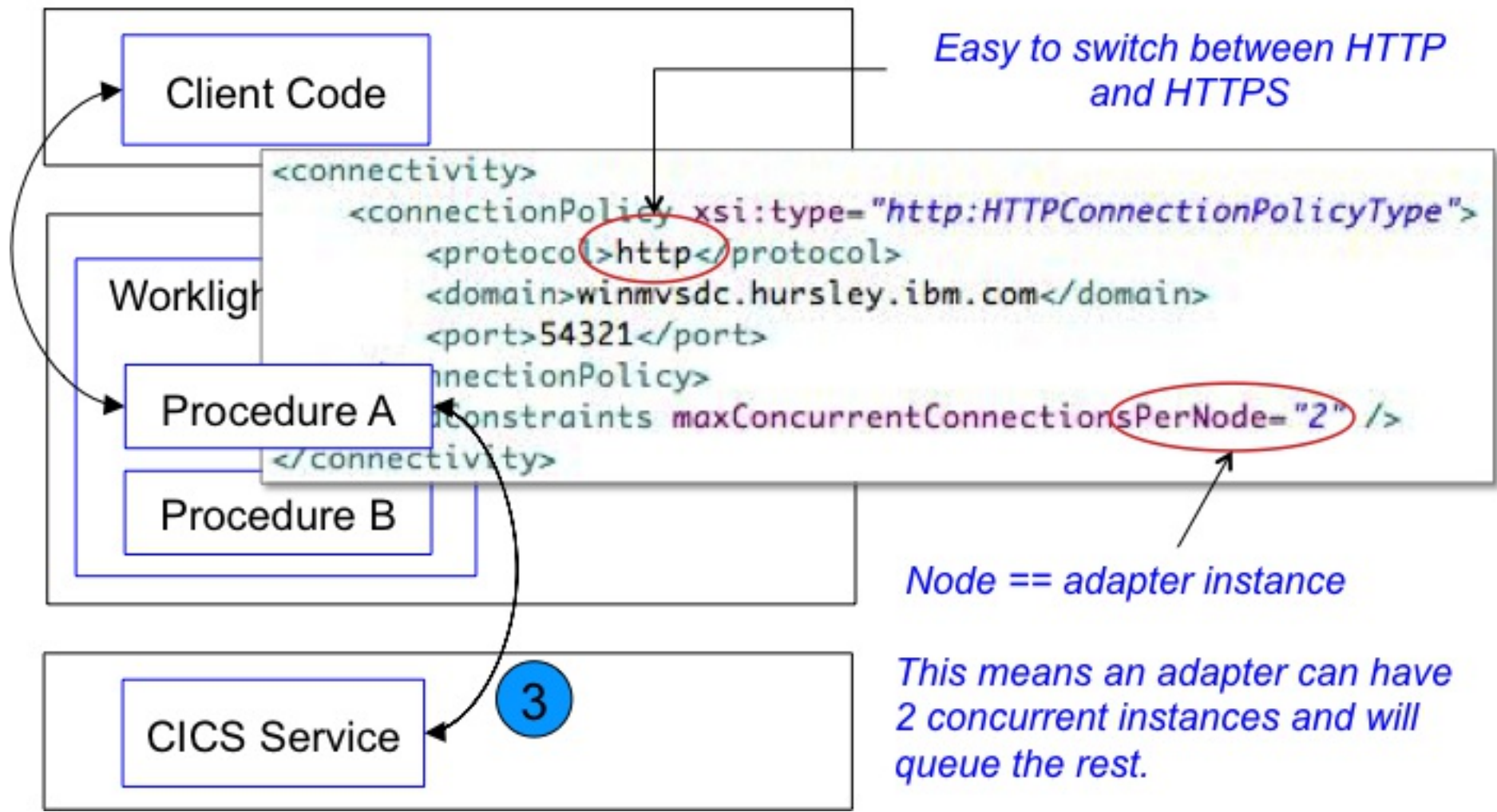




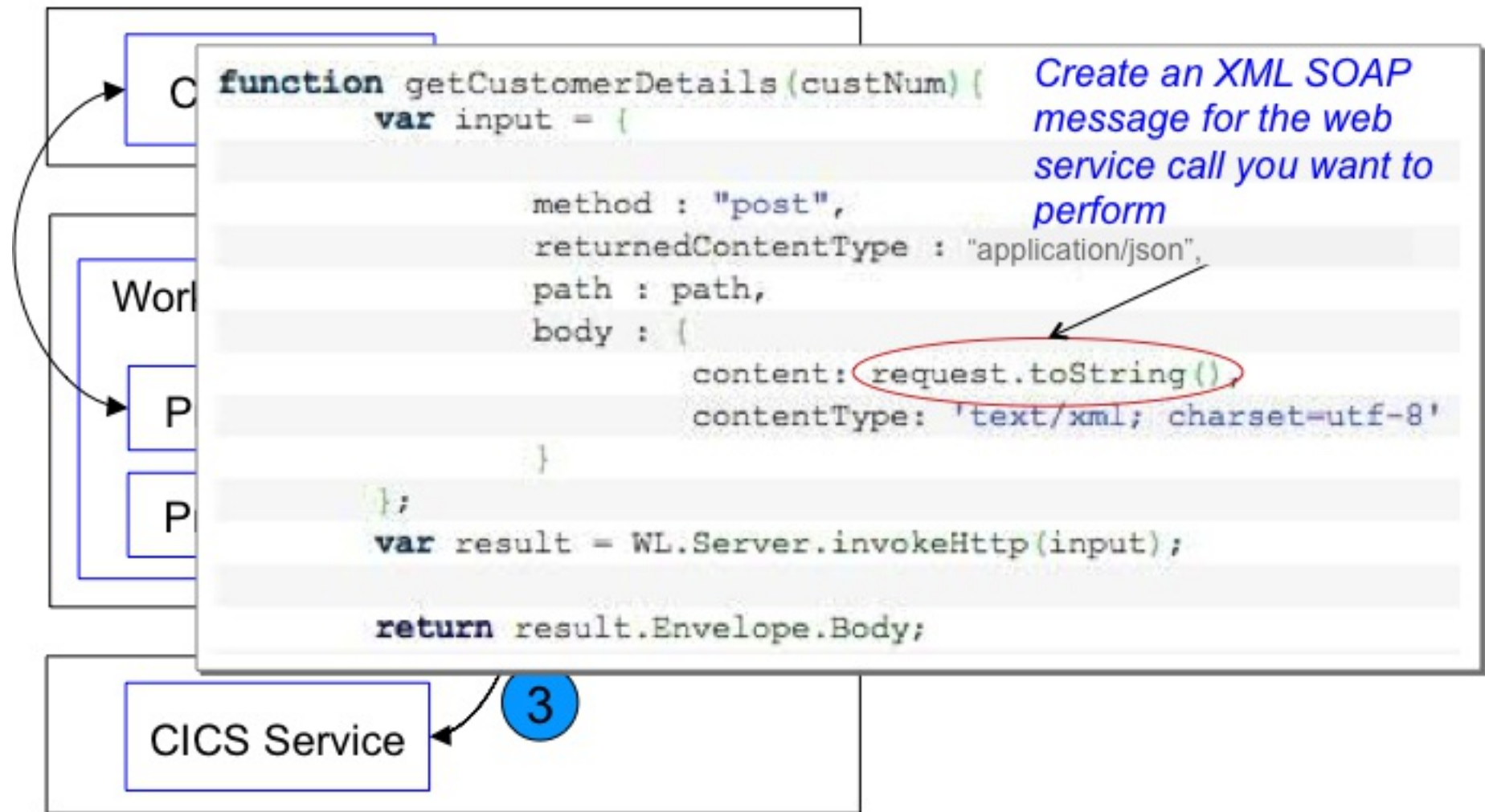
# Worklight Components – security check



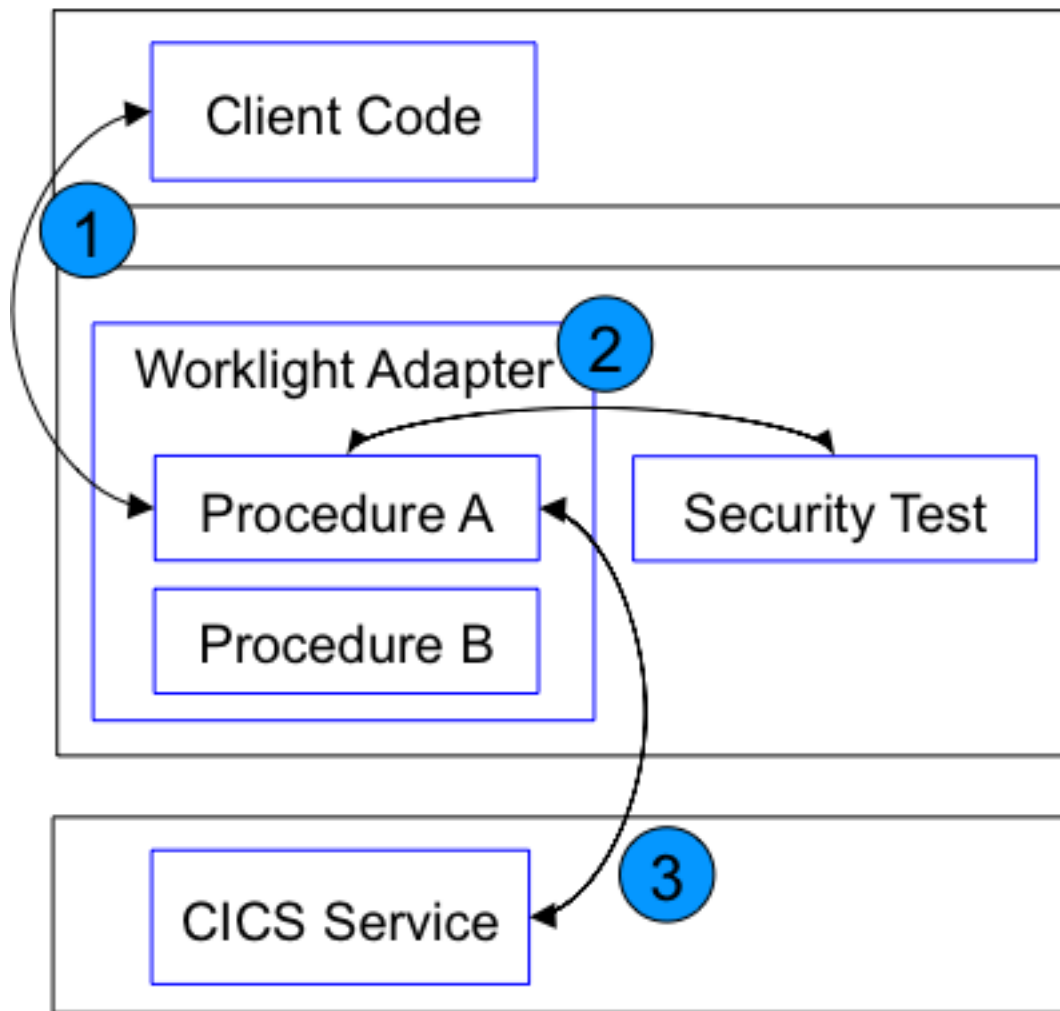
# Worklight Components – basic flow



# Worklight Components – basic flow



## Worklight Components – basic flow



Worklight server provides separation, security, and a variety of mobile services, helping control the impact mobile has on CICS Transaction Server

Thank you for listening  
Any questions

