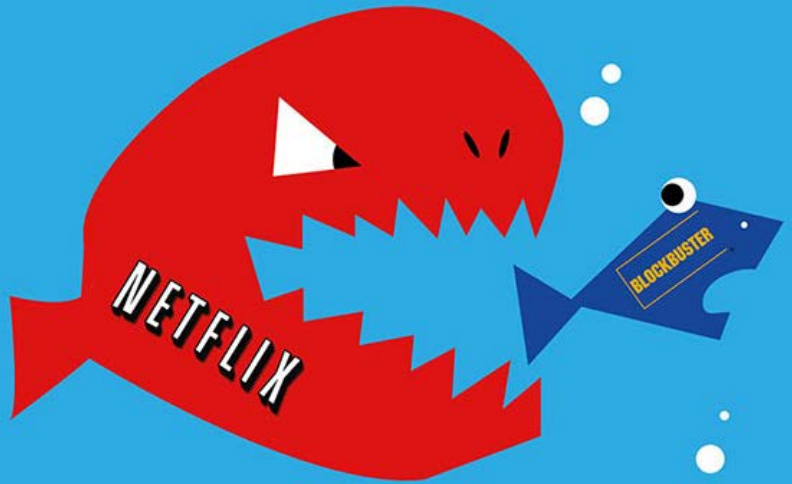
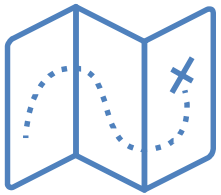


Are We the Blockbuster in the Netflix Era?

Muneer Merchant
Structural Group, Inc.

Write one strategic objective would you say is fundamental to the success of your organization?

- Why is it necessary and important in the bigger picture?
- What has stopped your organization from doing it?



If a solution is intended to “fix” what’s wrong, then framing “what’s wrong” in different ways can lead to different solutions

Dig Deeper

- Organic Growth
- Segmentation / Diversification
- Bundling and Unbundling
- Value Propositions
- Sales Force / Marketing

- Lower cost of Sales
- Lower cost of production
- Better Estimates.
- Eliminate inefficiencies
- Highly productive and safe crews

- Better Financial systems
- Cash Flows
- Better collections
- Lower insurance cost, EMR rating, Work comp claims

- Aligning culture to strategy
- Who gets rewarded , on what and why
- What level of organization is needed to support our strategies
- What comes first , As C level suite where do we place our efforts
- How do we prioritize our time & investment
- What’s our investment thesis
- What research is needed to get the answers

Priority

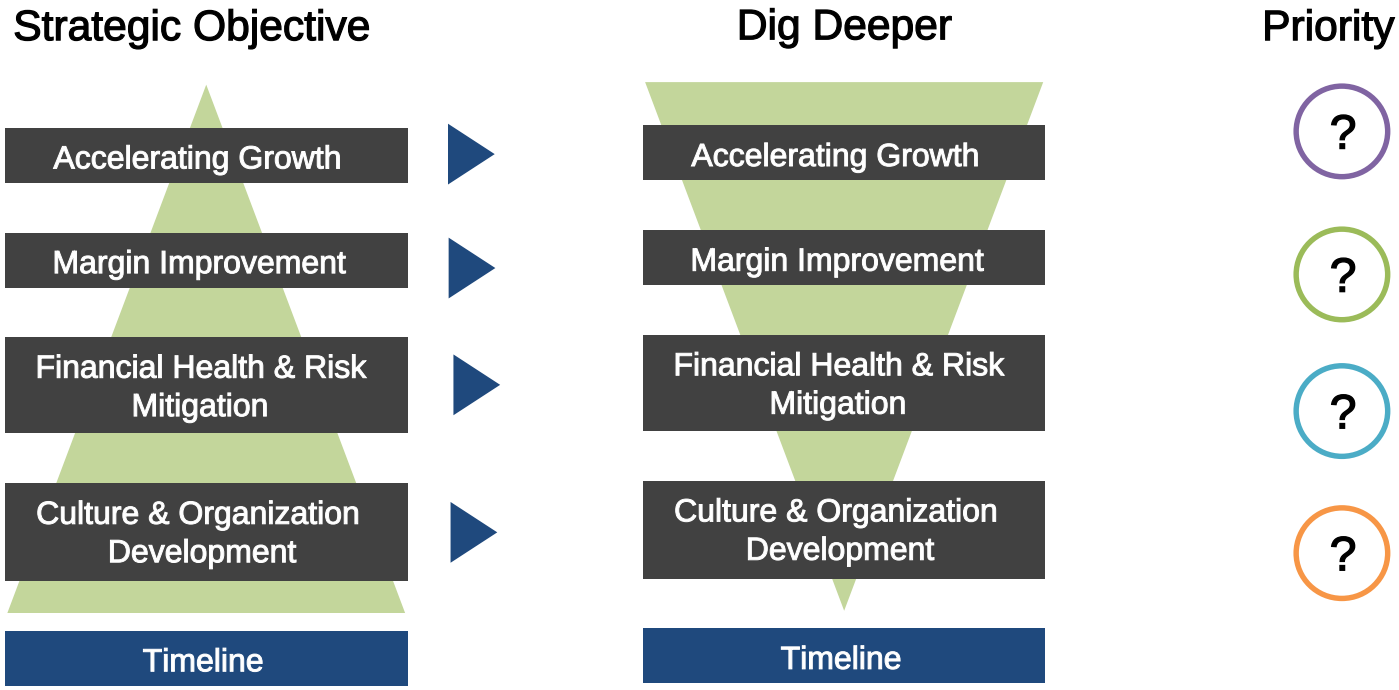
?

?

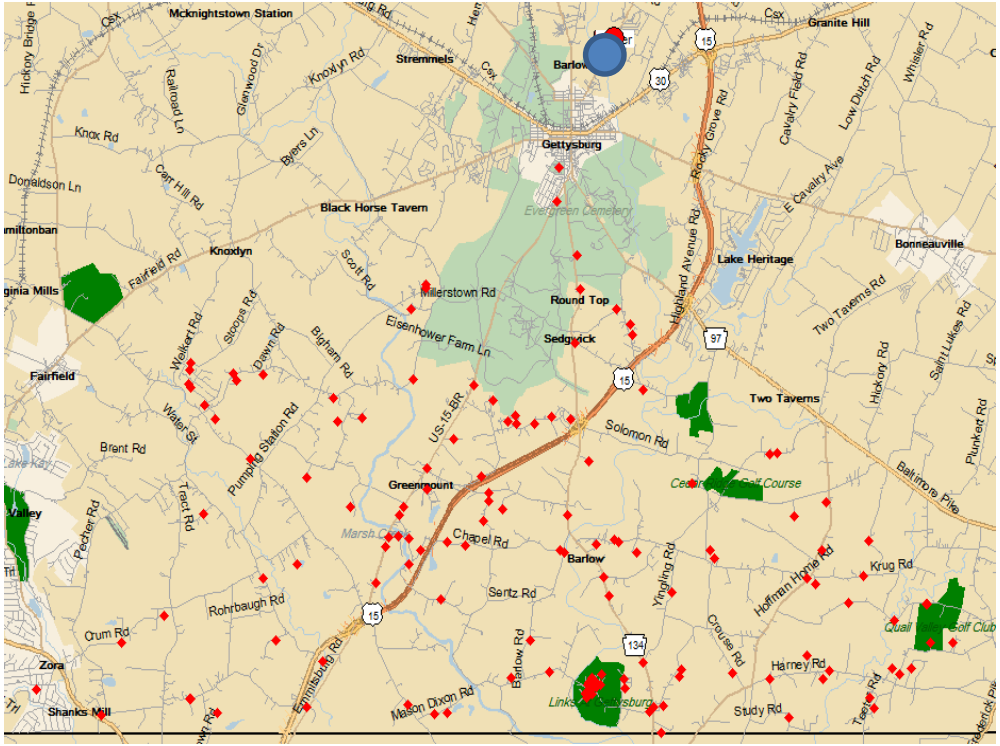
?

?

If a solution is intended to “fix” what’s wrong, then framing “what’s wrong” in different ways can lead to different solutions



Case Study: UPS



120 deliveries

What is the most cost effective way to serve these customers?

Approximate age of the Earth in seconds:
145,065,600,000,000,000

Number of ways to deliver 120 stops:
6,689,502,913,449,135,000,000,000,000,000,000,000,000,000,
000,000,000,000,000,000,000,000,000,000,000,000,000,000,
000,000,000,000,000,000,000,000,000,000,000,000,000,000,
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How Analytics Transformed Operations at UPS

The Logistical Complexities at UPS

55,000 package car drivers in US alone

106,000 **drivers** globally

16 million **packages** daily

One driver = trillions of ways to run delivery routes

Shaving just one mile/ driver = **$50 million** savings a year

The challenge: **Arriving at the most optimal route for drivers**

Business Benefits of Analytics

Reduction of **85 million** miles driven/ year

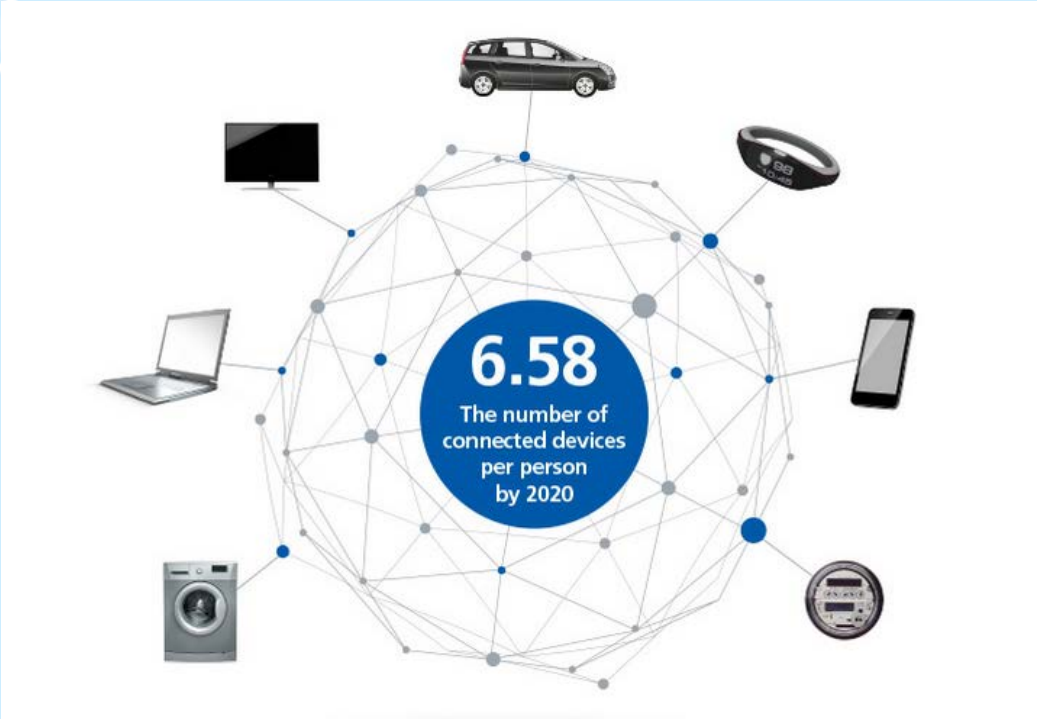
8 million fewer gallons of fuel used

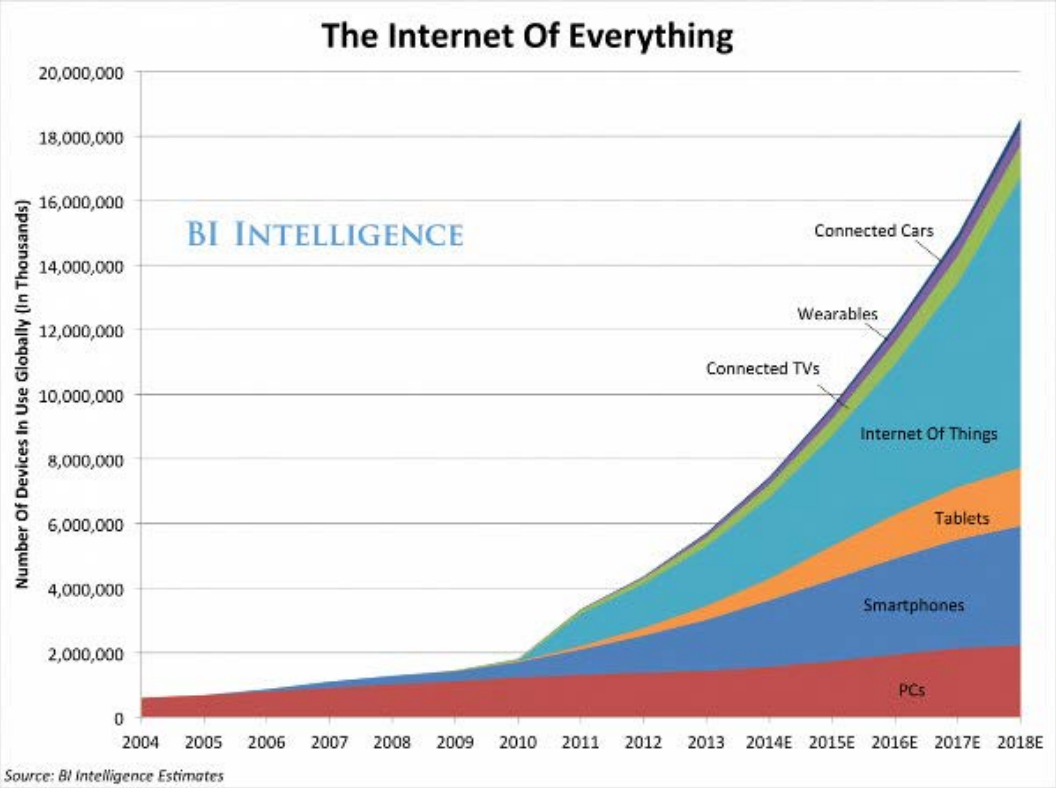
Reduction in **engine idling time** by **10 million** minutes

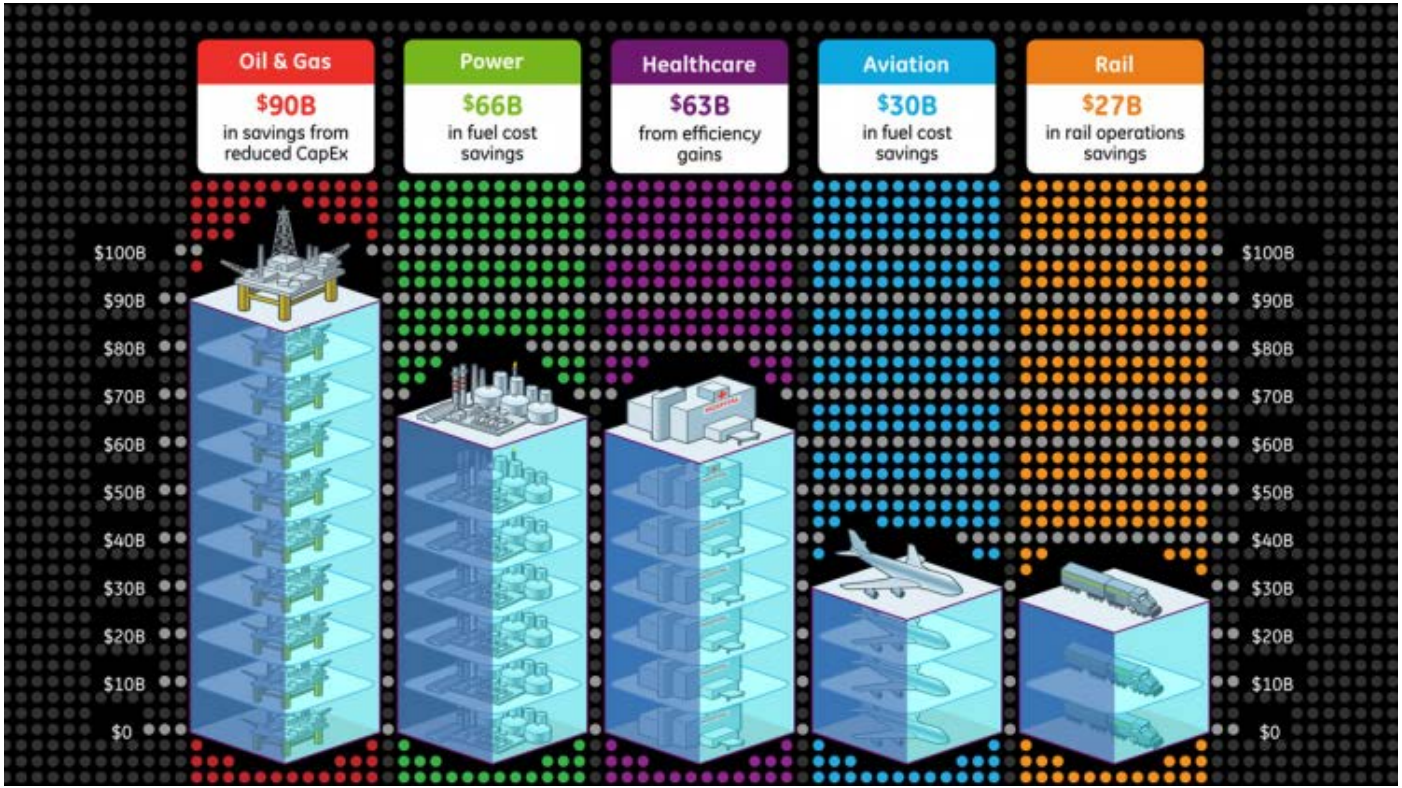
Reduction in **carbon footprint** by **6,500** metric tons

Analytics has changed the way UPS functions

Internet of Things




The Internet Of Everything
BI INTELLIGENCE
Number Of Devices In Use Globally (In Thousands)
20,000,000
18,000,000
16,000,000
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014E
2015E
2016E
2017E
2018E
Connected Cars
Wearables
Connected TVs
Internet Of Things
Tablets
Smartphones
PCs
Source: BI Intelligence Estimates


Oil & Gas
$90B
in savings from reduced CapEx
Power
$66B
in fuel cost savings
Healthcare
$63B
from efficiency gains
Aviation
$30B
in fuel cost savings
Rail
$27B
in rail operations savings
$100B
$90B
$80B
$70B
$60B
$50B
$40B
$30B
$20B
$10B
$0

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“Software is eating the world”

-Marc Andreessen

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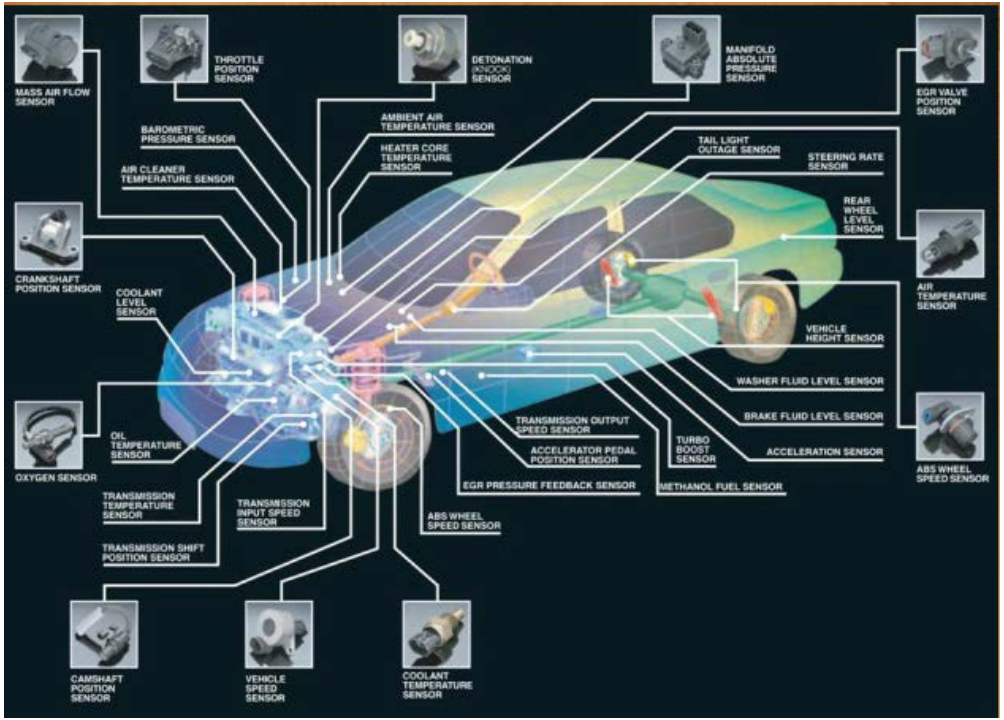
Tesla

Software Update
There is a new version of your Tesla Model S software.
Schedule installation, install now or close window to postpone.
1 : 00 AM
SET FOR THIS TIME
INSTALL NOW
19 hours, 32 minutes from now
During the update process you will not be able to drive the vehicle or use the touchscreen. The update will take up to 2 hours. The car must be in PARK.


MASS AIR FLOW SENSOR
THROTTLE POSITION SENSOR
DETONATION (KNOCK) SENSOR
MANIFOLD ABSOLUTE PRESSURE SENSOR
EGR VALVE POSITION SENSOR
BAROMETRIC PRESSURE SENSOR
AMBIENT AIR TEMPERATURE SENSOR
HEATER CORE TEMPERATURE SENSOR
AIR CLEANER TEMPERATURE SENSOR
TAIL LIGHT OUTAGE SENSOR
STEERING RATE SENSOR
REAR WHEEL LEVEL SENSOR
CRANKSHAFT POSITION SENSOR
COOLANT LEVEL SENSOR
AIR TEMPERATURE SENSOR
VEHICLE HEIGHT SENSOR
WASHER FLUID LEVEL SENSOR
BRAKE FLUID LEVEL SENSOR
OIL TEMPERATURE SENSOR
TRANSMISSION OUTPUT SPEED SENSOR
ACCELERATOR PEDAL POSITION SENSOR
TURBO BOOST SENSOR
ACCELERATION SENSOR
ABS WHEEL SPEED SENSOR
OXYGEN SENSOR
EGR PRESSURE FEEDBACK SENSOR
METHANOL FUEL SENSOR
TRANSMISSION TEMPERATURE SENSOR
TRANSMISSION INPUT SPEED SENSOR
ABS WHEEL SPEED SENSOR
TRANSMISSION SHIFT POSITION SENSOR
CAMSHAFT POSITION SENSOR
VEHICLE SPEED SENSOR
COOLANT TEMPERATURE SENSOR

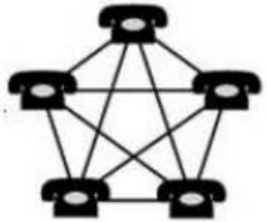
Appliances vs. Modular Systems

More users = more value = more users…

2 phones

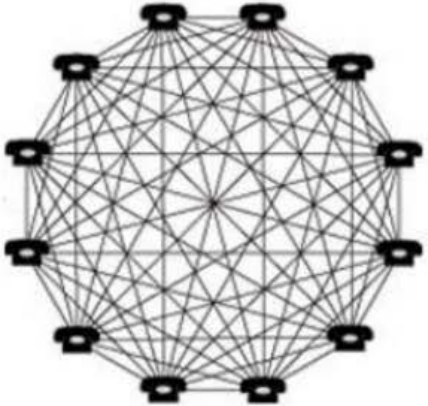
1 connection

5 phones

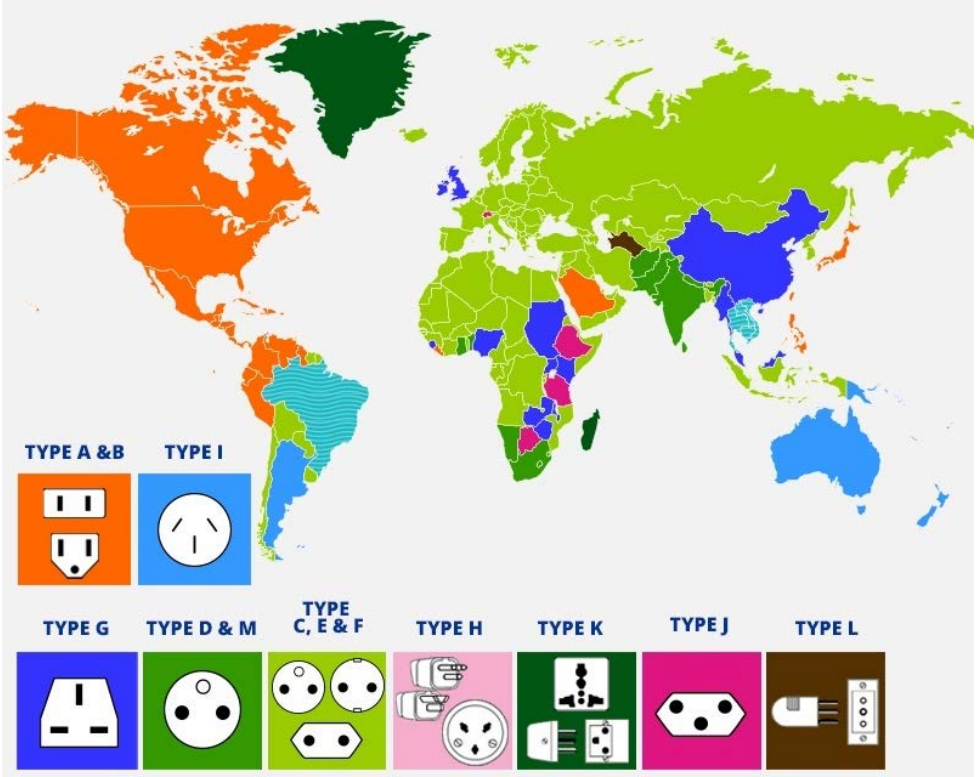


10 connections

12 phones



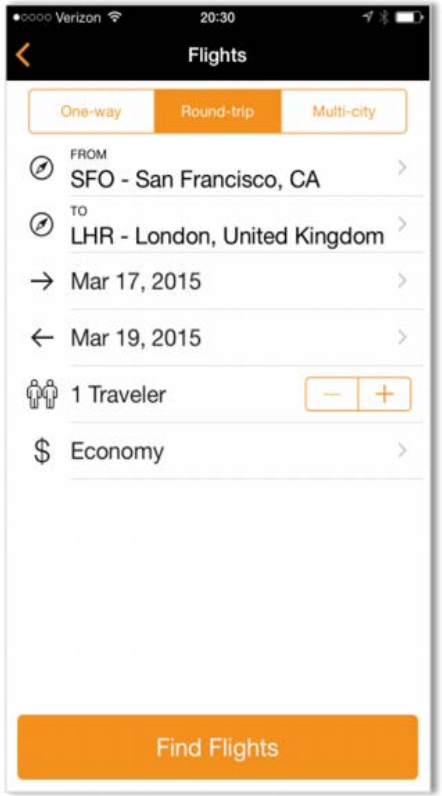
66 connections


TYPE A &B
TYPE I
TYPE G
TYPE D & M
TYPE C, E & F
TYPE H
TYPE K
TYPE J
TYPE L

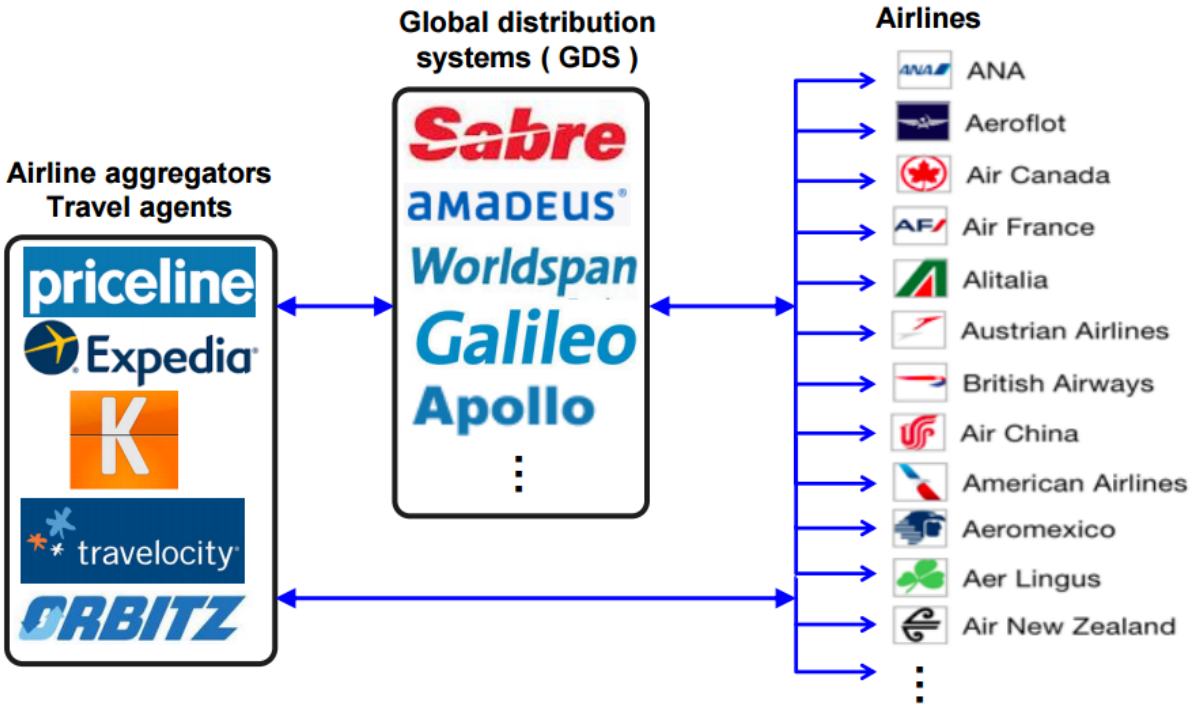
APIs

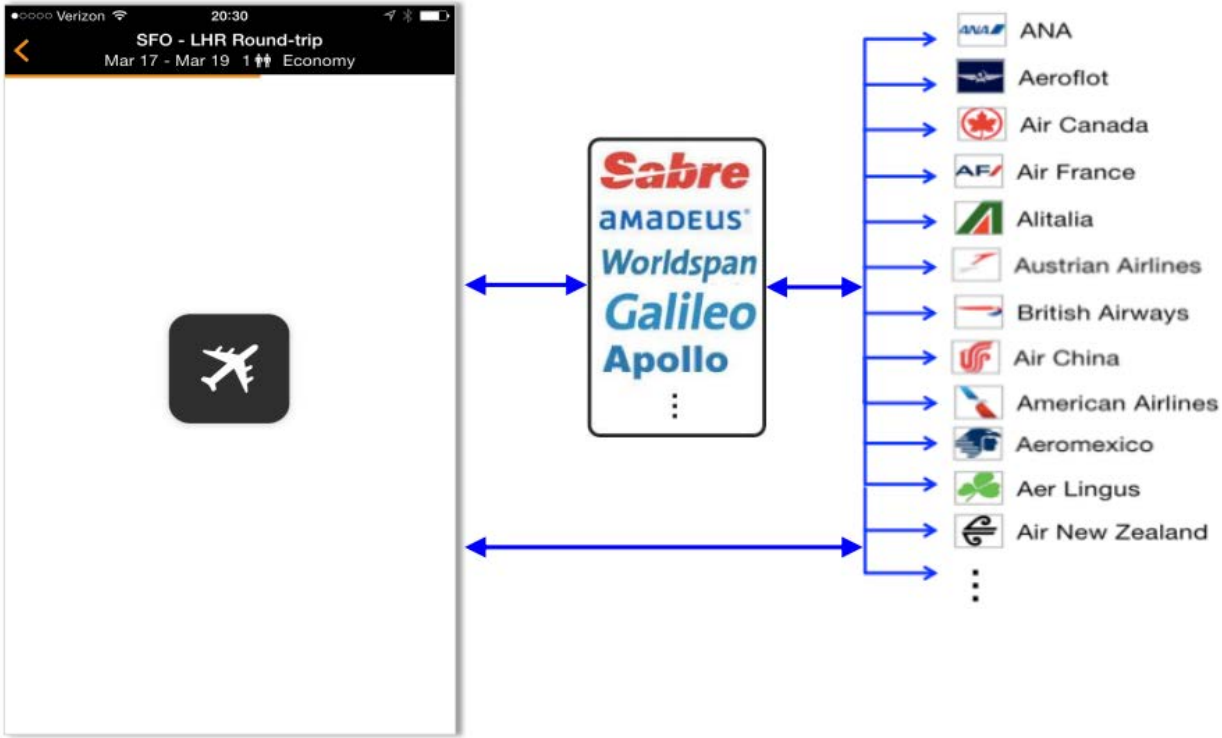
Flights
SFO - San Francisco, CA
LHR - London, United Kingdom
Mar 17, 2015
Mar 19, 2015
1 Traveler
Economy
Find Flights
KAYAK
Book Now
Welcome to United
Flight status
Check-in
IAD
EWR
UBER

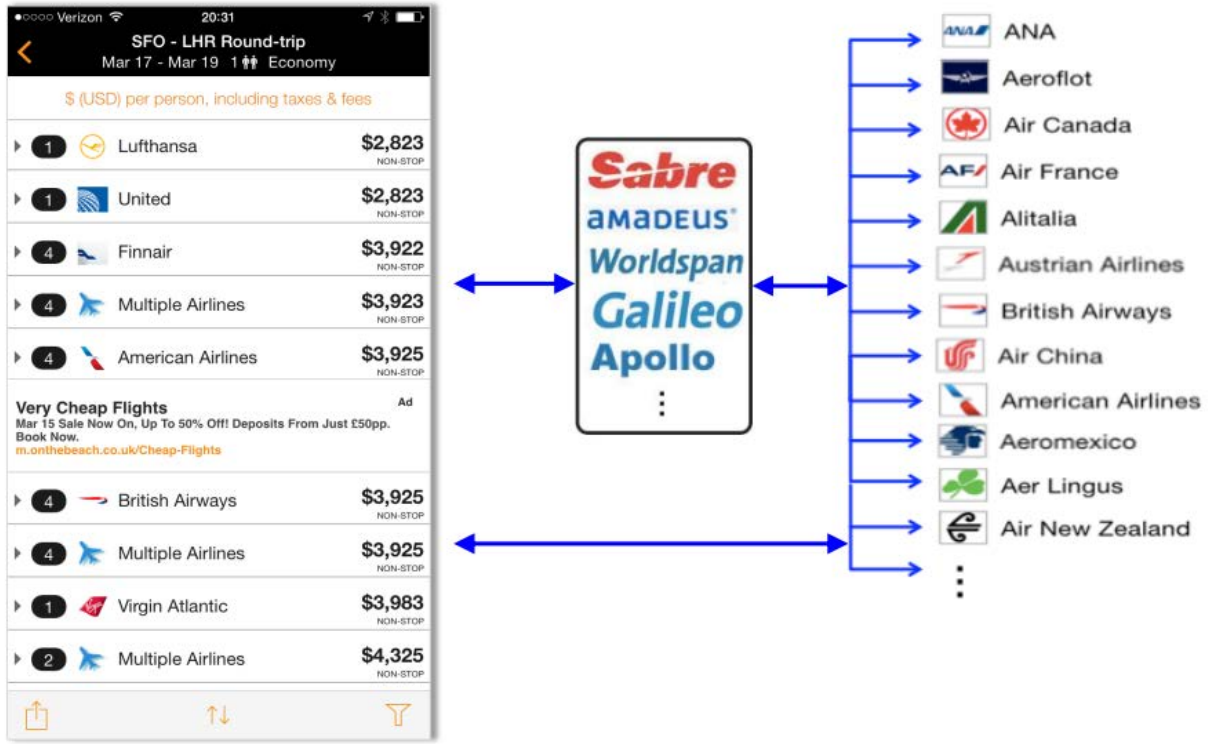
APIs

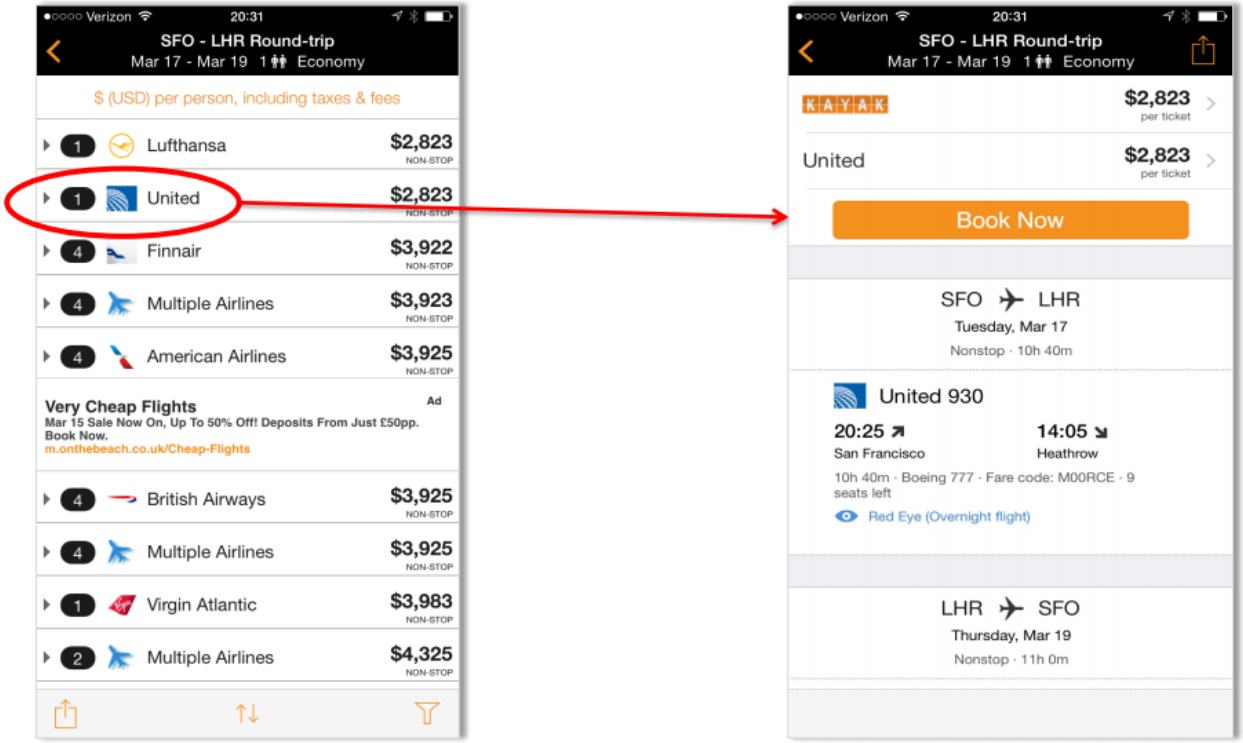


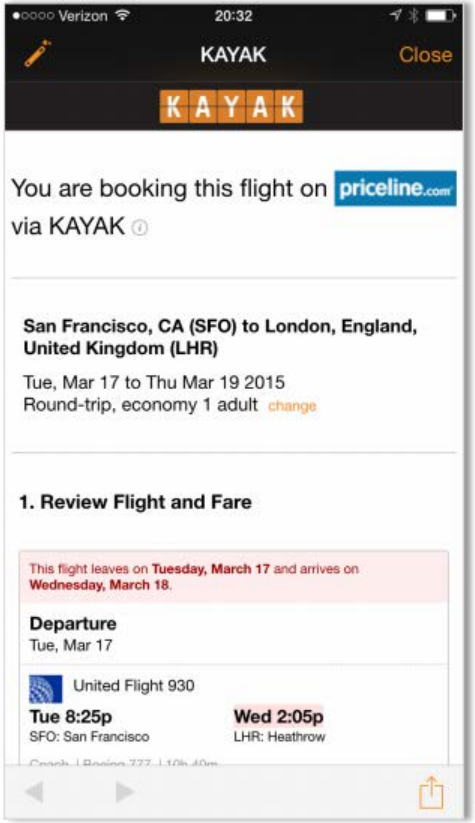
From work with Sumit Sharma, Haas MBA '08


Airline aggregators
Travel agents
priceline
Expedia
travelocity
ORBITZ
Global distribution
systems (GDS)
Sabre
AMADEUS
Worldspan
Galileo
Apollo
Airlines
ANA
Aeroflot
Air Canada
Air France
Alitalia
Austrian Airlines
British Airways
Air China
American Airlines
Aeromexico
Aer Lingus
Air New Zealand


Verizon
20:30
SFO - LHR Round-trip
Mar 17 - Mar 19 1 Economy
Sabre
AMADEUS
Worldspan
Galileo
Apollo
ANA
Aeroflot
Air Canada
Air France
Alitalia
Austrian Airlines
British Airways
Air China
American Airlines
Aeromexico
Aer Lingus
Air New Zealand


Verizon
20:31
SFO - LHR Round-trip
Mar 17 - Mar 19 1 Economy
$ (USD) per person, including taxes & fees
1 Lufthansa $2,823 NON-STOP
1 United $2,823 NON-STOP
4 Finnair $3,922 NON-STOP
4 Multiple Airlines $3,923 NON-STOP
4 American Airlines $3,925 NON-STOP
Very Cheap Flights
Ad
Mar 15 Sale Now On, Up To 50% Off! Deposits From Just £50pp. Book Now.
m.onthebeach.co.uk/Cheap-Flights
4 British Airways $3,925 NON-STOP
4 Multiple Airlines $3,925 NON-STOP
1 Virgin Atlantic $3,983 NON-STOP
2 Multiple Airlines $4,325 NON-STOP
Sabre
AMADEUS
Worldspan
Galileo
Apollo
ANA
Aeroflot
Air Canada
Air France
Alitalia
Austrian Airlines
British Airways
Air China
American Airlines
Aeromexico
Aer Lingus
Air New Zealand


Verizon 20:31
SFO - LHR Round-trip
Mar 17 - Mar 19 1 Economy
$ (USD) per person, including taxes & fees
1 Lufthansa $2,823 NON-STOP
1 United $2,823 NON-STOP
4 Finnair $3,922 NON-STOP
4 Multiple Airlines $3,923 NON-STOP
4 American Airlines $3,925 NON-STOP
Very Cheap Flights
Ad
Mar 15 Sale Now On, Up To 50% Off! Deposits From Just £50pp. Book Now.
m.onthebeach.co.uk/Cheap-Flights
4 British Airways $3,925 NON-STOP
4 Multiple Airlines $3,925 NON-STOP
1 Virgin Atlantic $3,983 NON-STOP
2 Multiple Airlines $4,325 NON-STOP
Verizon 20:31
SFO - LHR Round-trip
Mar 17 - Mar 19 1 Economy
KAYAK $2,823 per ticket
United $2,823 per ticket
Book Now
SFO LHR
Tuesday, Mar 17
Nonstop · 10h 40m
United 930
20:25 San Francisco
14:05 Heathrow
10h 40m · Boeing 777 · Fare code: M00RCE · 9 seats left
Red Eye (Overnight flight)
LHR SFO
Thursday, Mar 19
Nonstop · 11h 0m

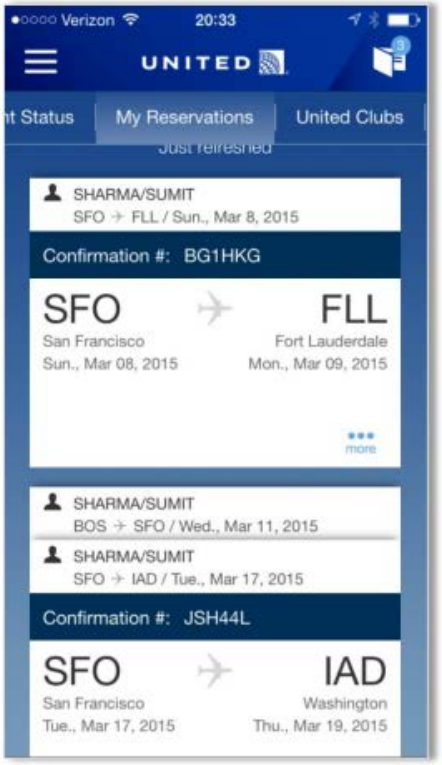

Verizon
20:32
KAYAK
Close
KAYAK
You are booking this flight on priceline.com
via KAYAK
San Francisco, CA (SFO) to London, England, United Kingdom (LHR)
Tue, Mar 17 to Thu Mar 19 2015
Round-trip, economy 1 adult change
1. Review Flight and Fare
This flight leaves on Tuesday, March 17 and arrives on Wednesday, March 18.
Departure
Tue, Mar 17
United Flight 930
Tue 8:25p
SFO: San Francisco
Wed 2:05p
LHR: Heathrow

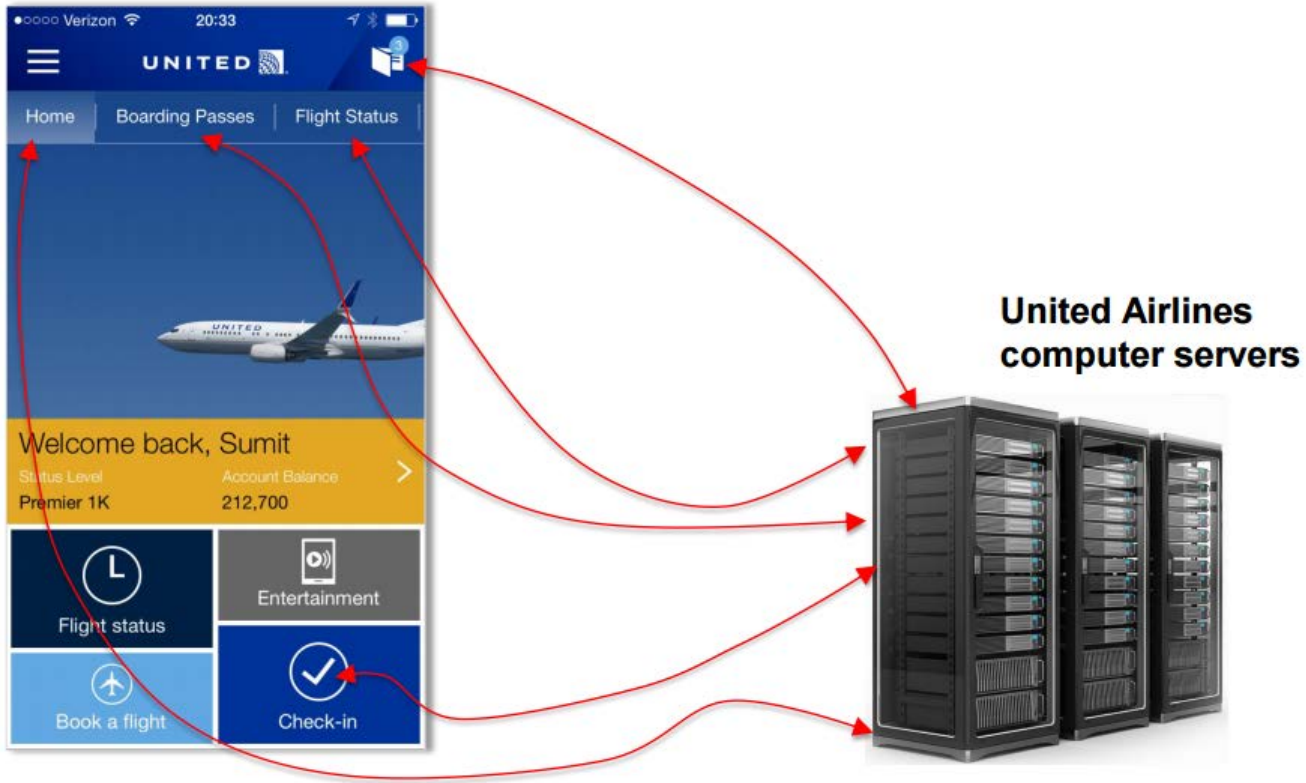
K
priceline
Apollo
UNITED

APIs

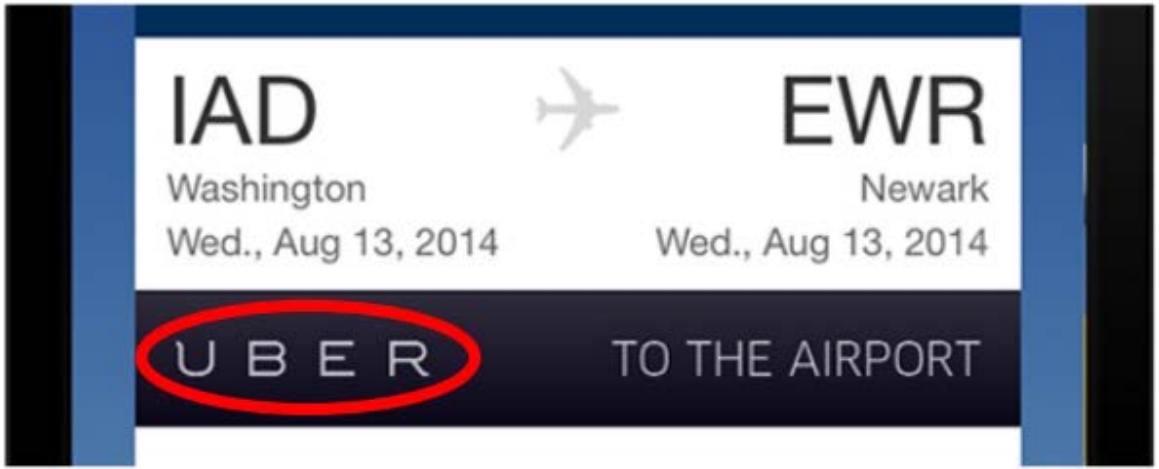
Flights
SFO - San Francisco, CA
LHR - London, United Kingdom
Mar 17, 2015
Mar 19, 2015
1 Traveler
Economy
Find Flights
SFO - LHR Round-trip
Lufthansa
United
Finnair
British Airways
Multiple Airlines
Virgin Atlantic
Multiple Airlines
Book Now
SFO LHR
LHR SFO
Welcome to United
Flight status
Check-in
EWR
TO THE AIRPORT
UBER
Washington, DC, United St...
Washington Dulles International...
K A Y A K
United Airlines

Verizon
20:33
UNITED
Home
Boarding Passes
Flight Status
Welcome back, Sumit
Status Level
Premier 1K
Account Balance
212,700
Flight status
Entertainment
Book a flight
Check-in


Verizon
20:33
UNITED
My Reservations
United Clubs
SHARMA/SUMIT
SFO → FLL / Sun., Mar 8, 2015
Confirmation #: BG1HKG
SFO
San Francisco
Sun., Mar 08, 2015
FLL
Fort Lauderdale
Mon., Mar 09, 2015
more
SHARMA/SUMIT
BOS → SFO / Wed., Mar 11, 2015
SHARMA/SUMIT
SFO → IAD / Tue., Mar 17, 2015
Confirmation #: JSH44L
SFO
San Francisco
Tue., Mar 17, 2015
IAD
Washington
Thu., Mar 19, 2015

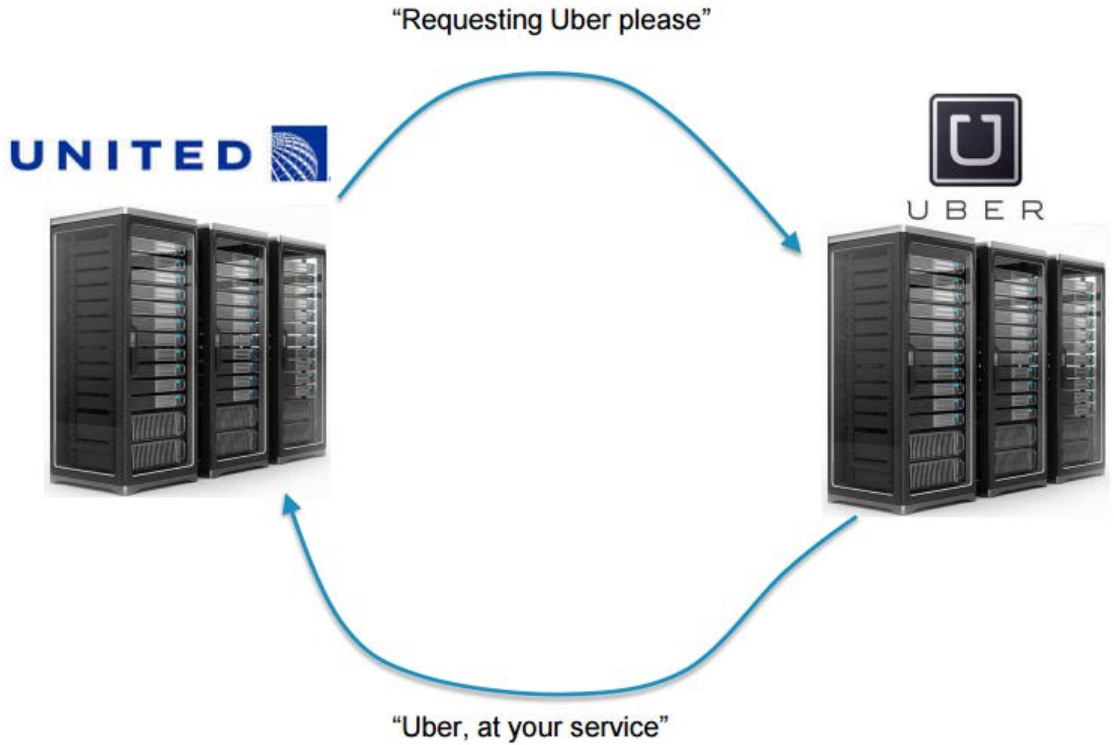

Verizon
20:33
UNITED
Home
Boarding Passes
Flight Status
Welcome back, Sumit
Status Level
Premier 1K
Account Balance
212,700
Flight status
Entertainment
Book a flight
Check-in
United Airlines
computer servers

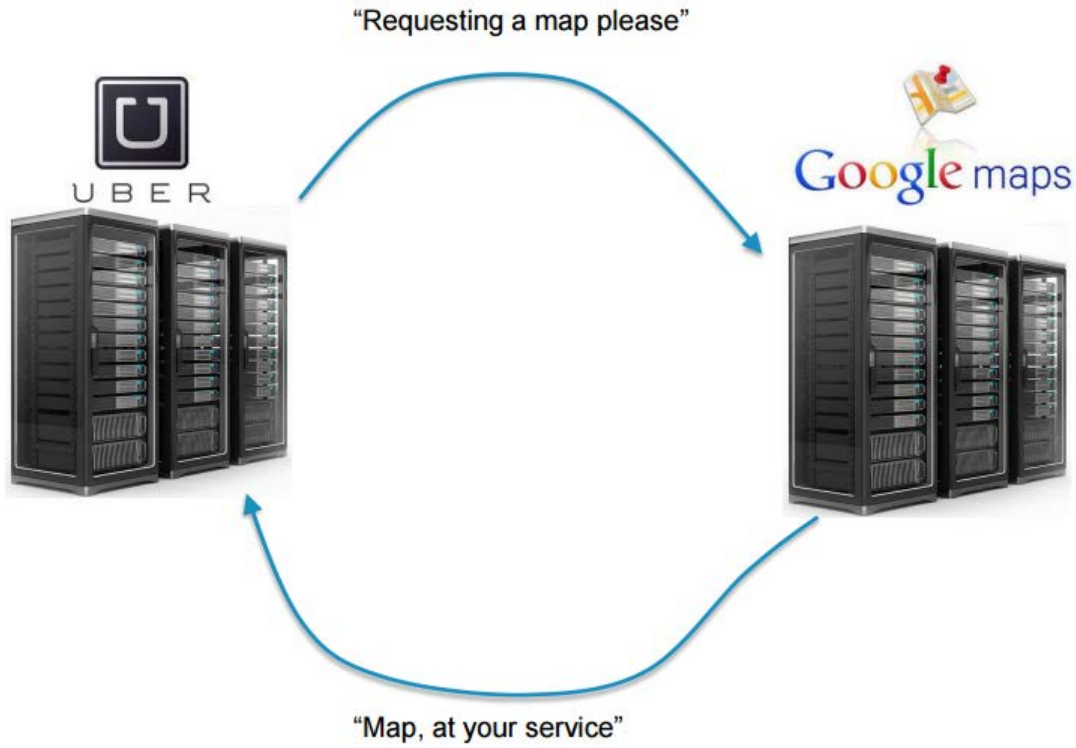
Uber section inside United app



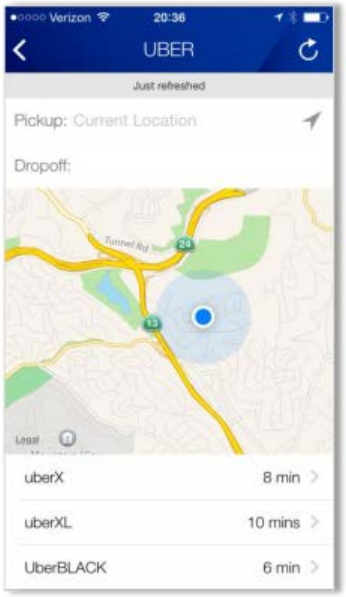
APIs

Flights
SFO - San Francisco, CA
LHR - London, United Kingdom
Mar 17, 2015
Mar 19, 2015
1 Traveler
Economy
Find Flights
KAYAK
Book Now
United Airlines
Welcome to United
Flight status
Check-in
EWR
UBER

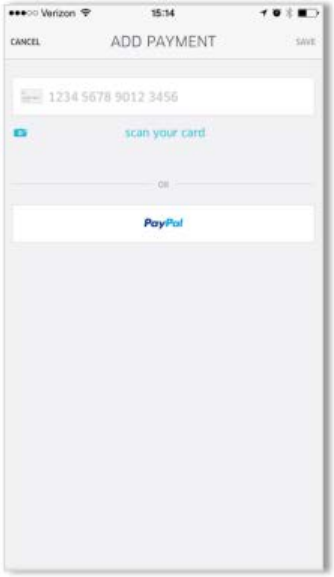

"Requesting Uber please"
UNITED
UBER
"Uber, at your service"

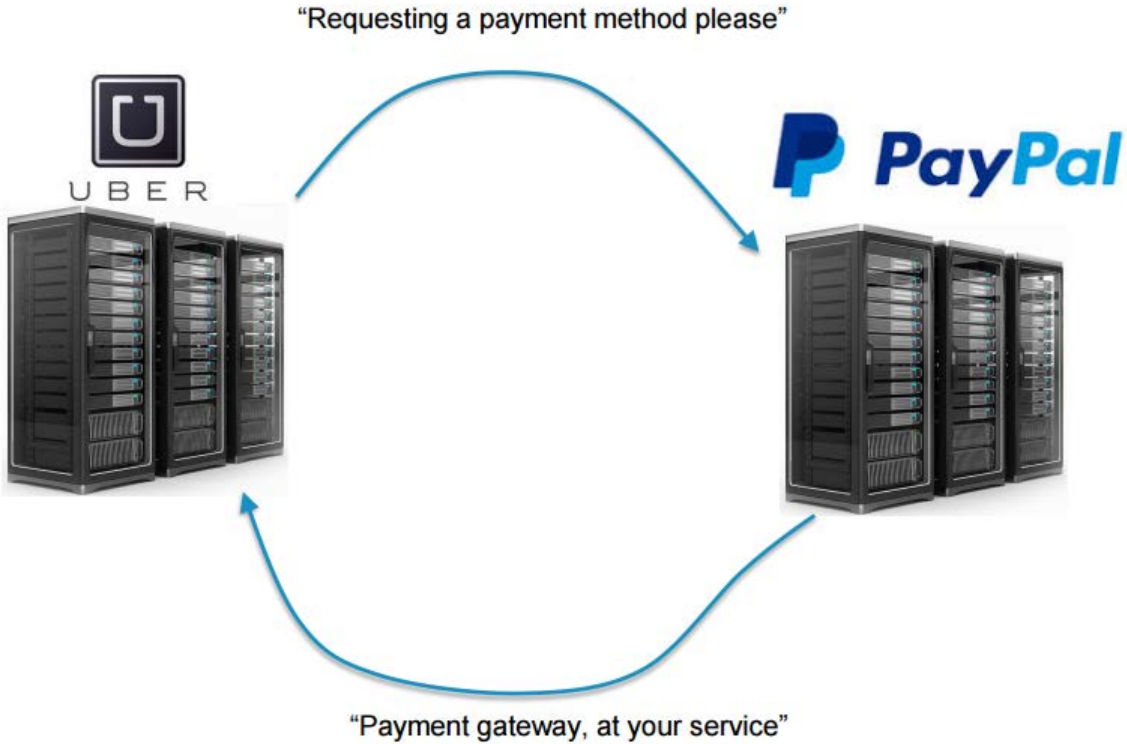

"Requesting a map please"
UBER
Google maps
"Map, at your service"

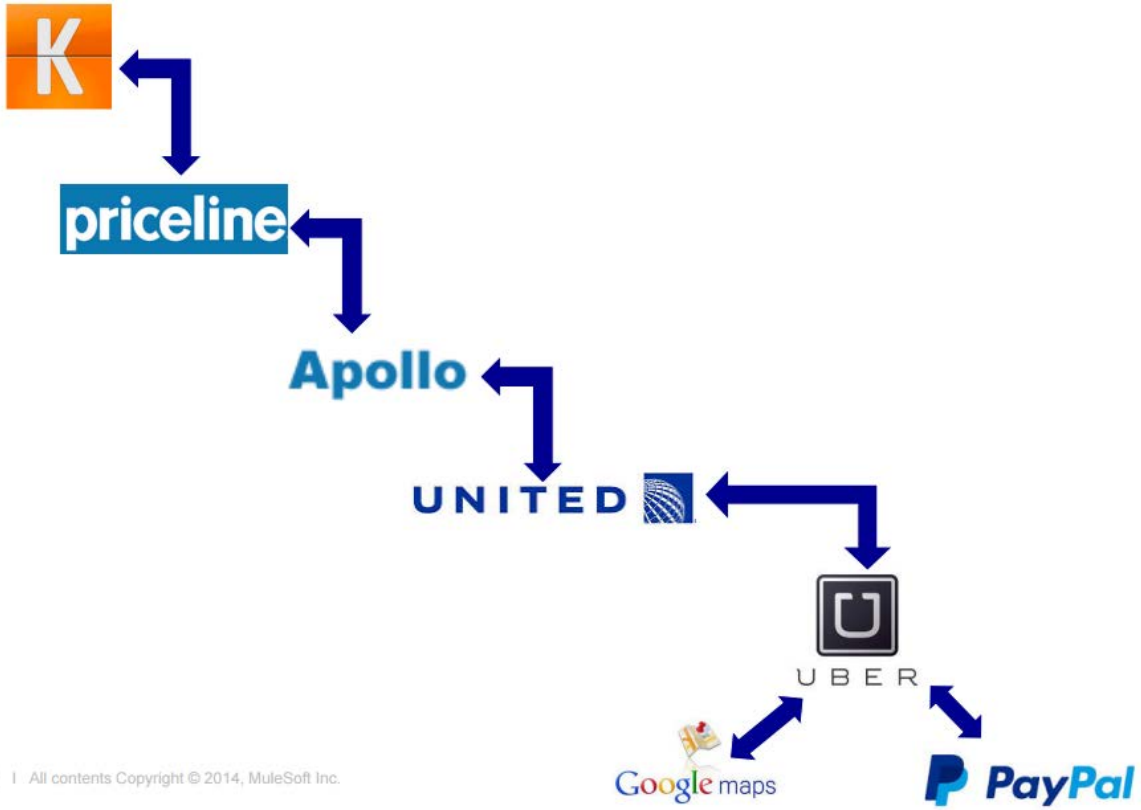
UBER


Verizon
20:36
UBER
Just refreshed
Pickup: Current Location
Dropoff:
uberX 8 min
uberXL 10 mins
UberBLACK 6 min

PayPal


Verizon
15:14
CANCEL
ADD PAYMENT
SAVE
1234 5678 9012 3456
scan your card
OR
PayPal


"Requesting a payment method please"
UBER
PayPal
"Payment gateway, at your service"



21 I All contents Copyright © 2014, MuleSoft Inc.

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"APIs are eating the world"

– Greg LaBlanc

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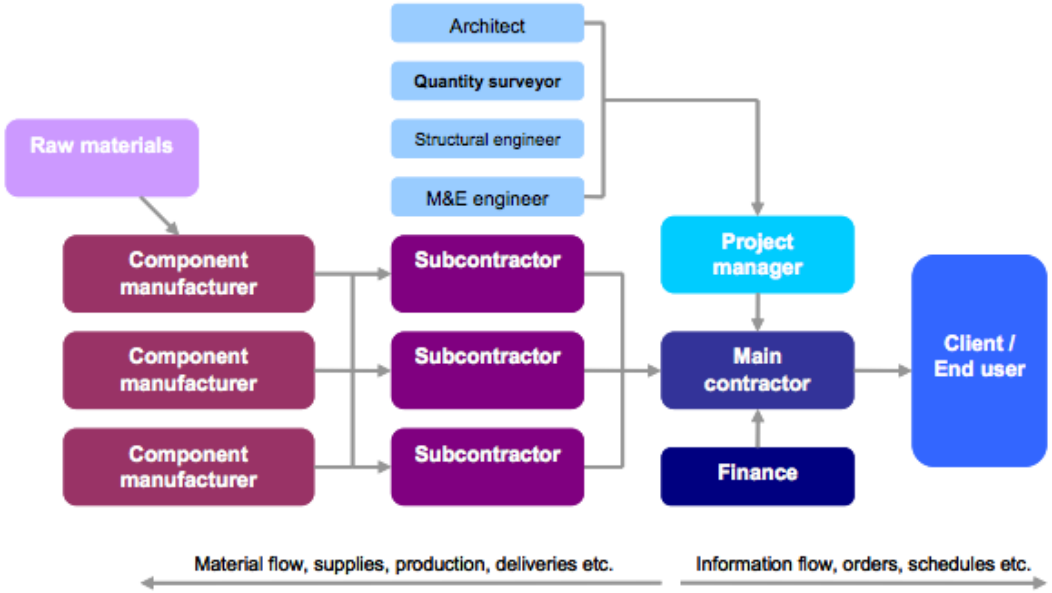
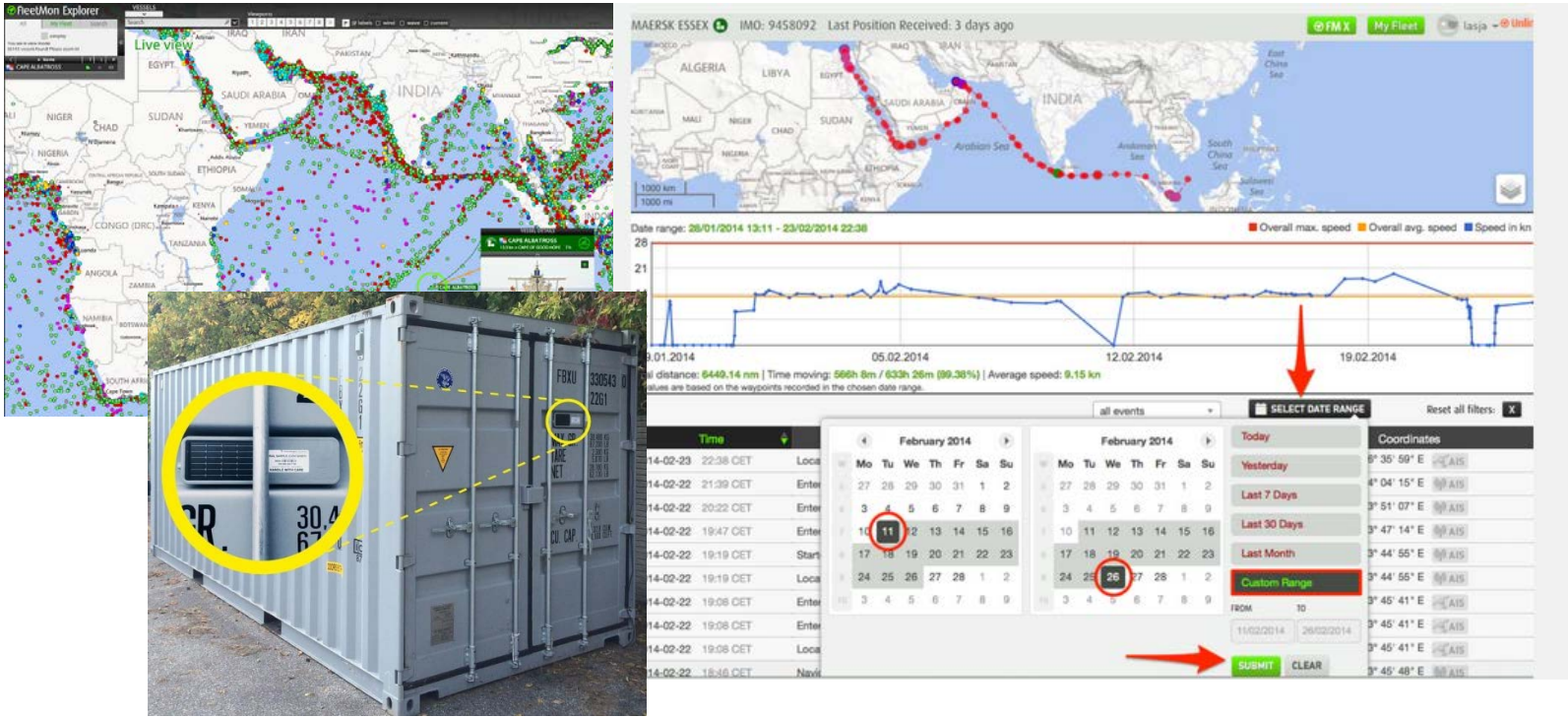
Figure 3.6: The construction supply chain

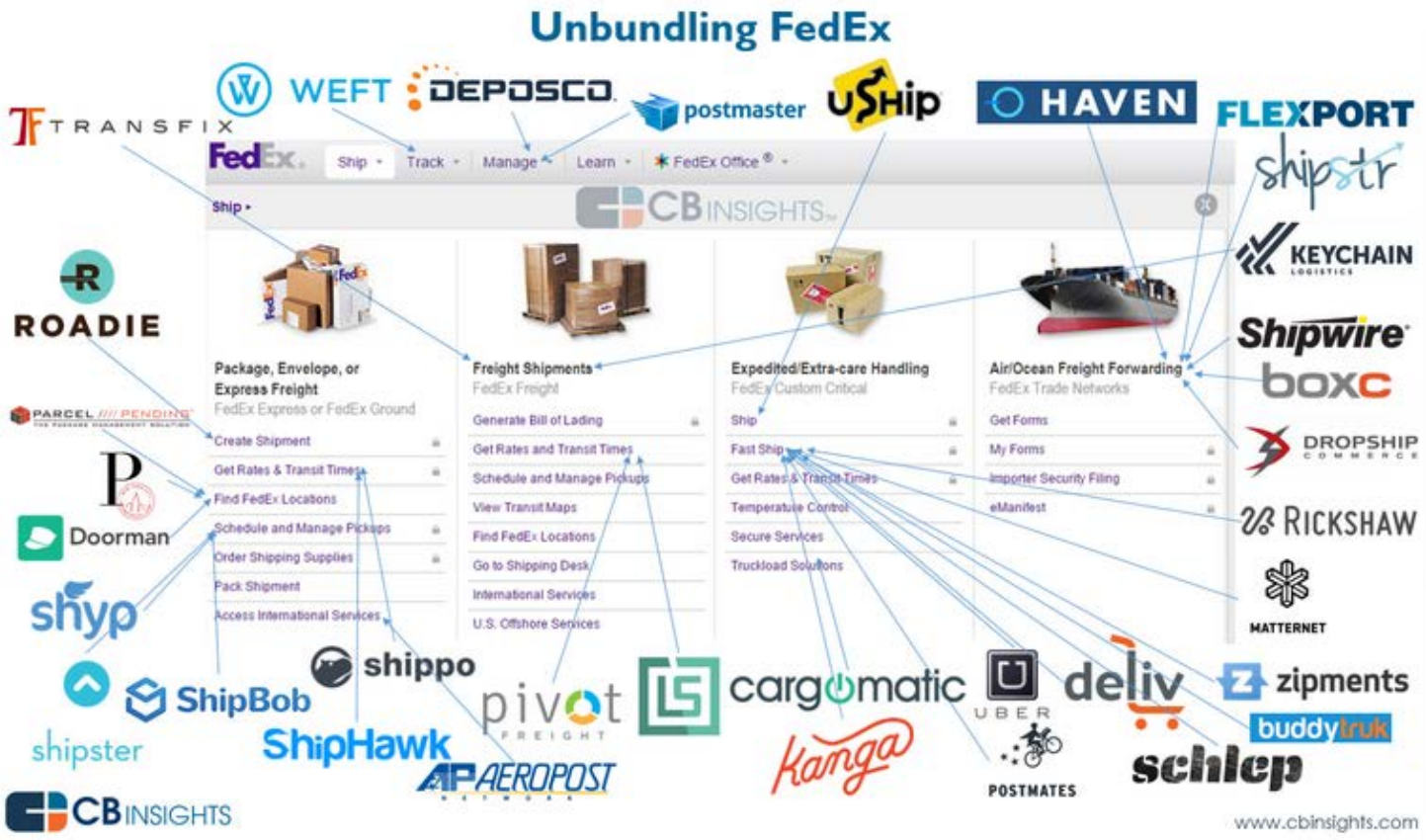


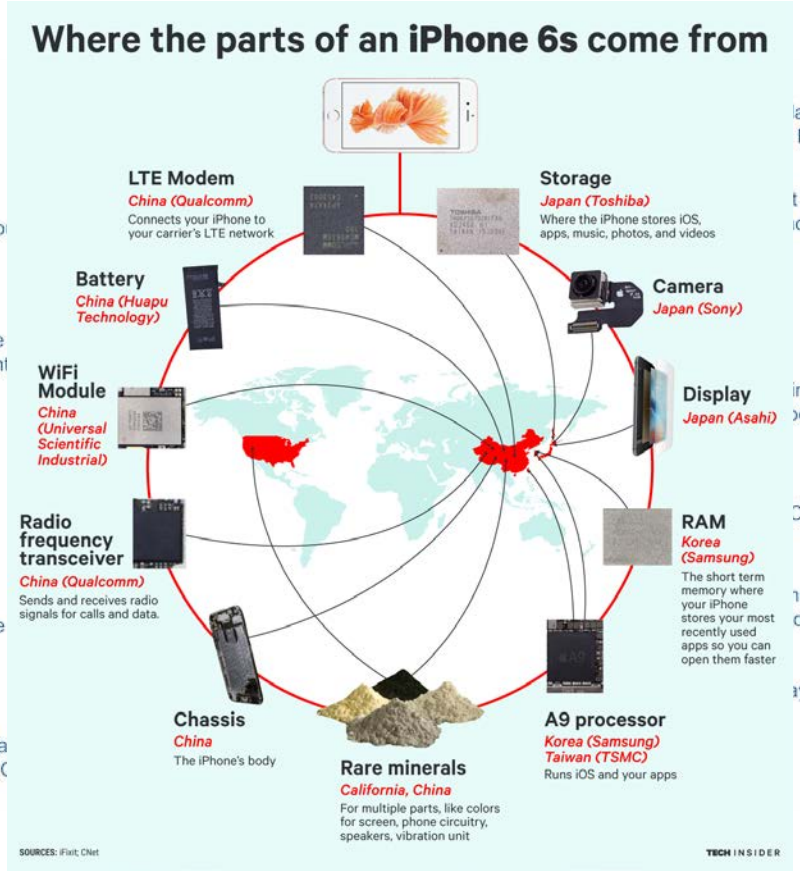
Note: This is a very simplified representation of construction supply chain. In practice a construction project may rely on tens of subcontractors and component manufacturers.

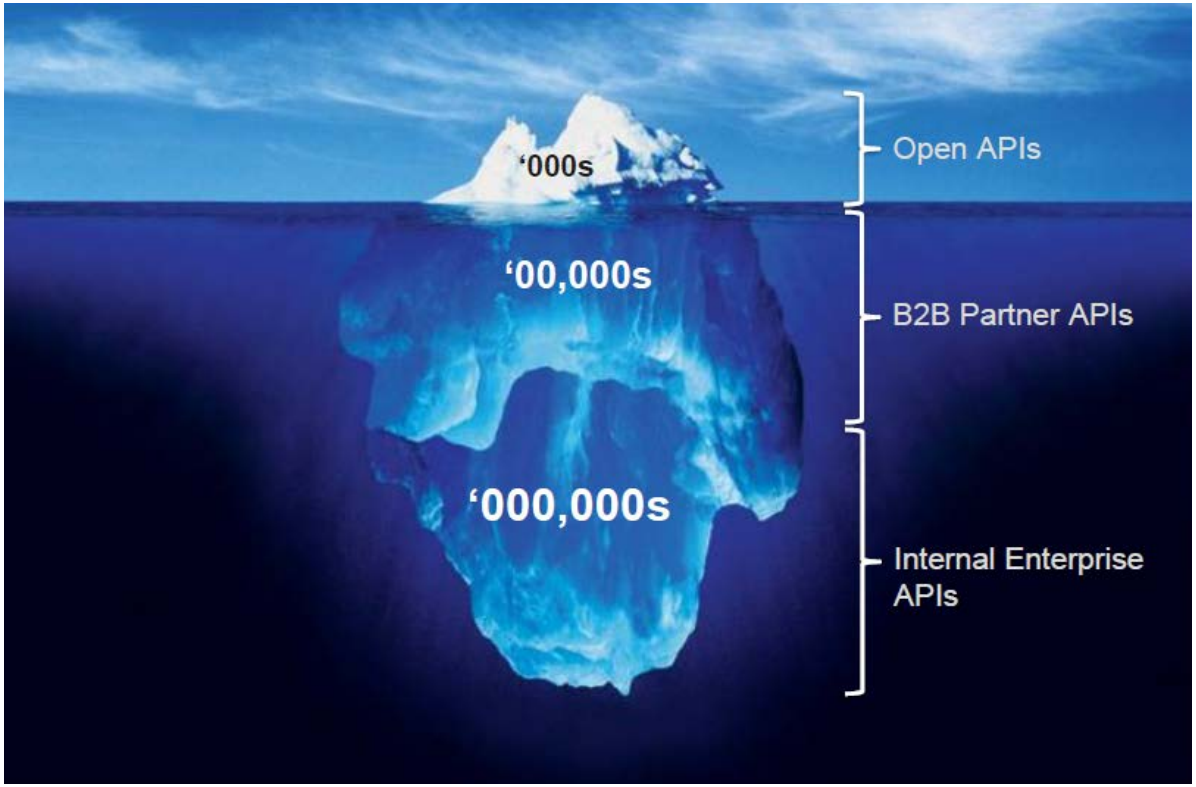
Modularity

Internet of Shipping




Unbundling FedEx
WEFT
DEPOSCO
postmaster
uShip
HAVEN
FLEXPORT
TRANSFIX
shipstr
FedEx
Ship
Track
Manage
Learn
FedEx Office
CB INSIGHTS
KEYCHAIN
ROADIE
Shipwire
boxc
Package, Envelope, or Express Freight
FedEx Express or FedEx Ground
Freight Shipments
FedEx Freight
Expedited/Extra-care Handling
FedEx Custom Critical
Air/Ocean Freight Forwarding
FedEx Trade Networks
Create Shipment
Get Rates & Transit Times
Find FedEx Locations
Schedule and Manage Pickups
Order Shipping Supplies
Pack Shipment
Access International Services
Generate Bill of Lading
Get Rates and Transit Times
Schedule and Manage Pickups
View Transit Maps
Find FedEx Locations
Go to Shipping Desk
International Services
U.S. Offshore Services
Ship
Fast Ship
Get Rates & Transit Times
Temperature Control
Secure Services
Truckload Solutions
Get Forms
My Forms
Importer Security Filing
eManifest
PARCEL PENDING
DROPSHIP COMMERCE
RICKSHAW
Doorman
MATTERNET
shyp
shippo
ShipBob
pivot FREIGHT
cargomatic
UBER
deliv
zipments
buddytruk
shipster
ShipHawk
Kanga
POSTMATES
schlep
AEROPOST
CB INSIGHTS
www.cbinsights.com


Where the parts of an iPhone 6s come from
LTE Modem
China (Qualcomm)
Connects your iPhone to your carrier's LTE network
Storage
Japan (Toshiba)
Where the iPhone stores iOS, apps, music, photos, and videos
Battery
China (Huapu Technology)
Camera
Japan (Sony)
WiFi Module
China (Universal Scientific Industrial)
Display
Japan (Asahi)
Radio frequency transceiver
China (Qualcomm)
Sends and receives radio signals for calls and data.
RAM
Korea (Samsung)
The short term memory where your iPhone stores your most recently used apps so you can open them faster
Chassis
China
The iPhone's body
A9 processor
Korea (Samsung)
Taiwan (TSMC)
Runs iOS and your apps
Rare minerals
California, China
For multiple parts, like colors for screen, phone circuitry, speakers, vibration unit
SOURCES: iFixit, CNet
TECH INSIDER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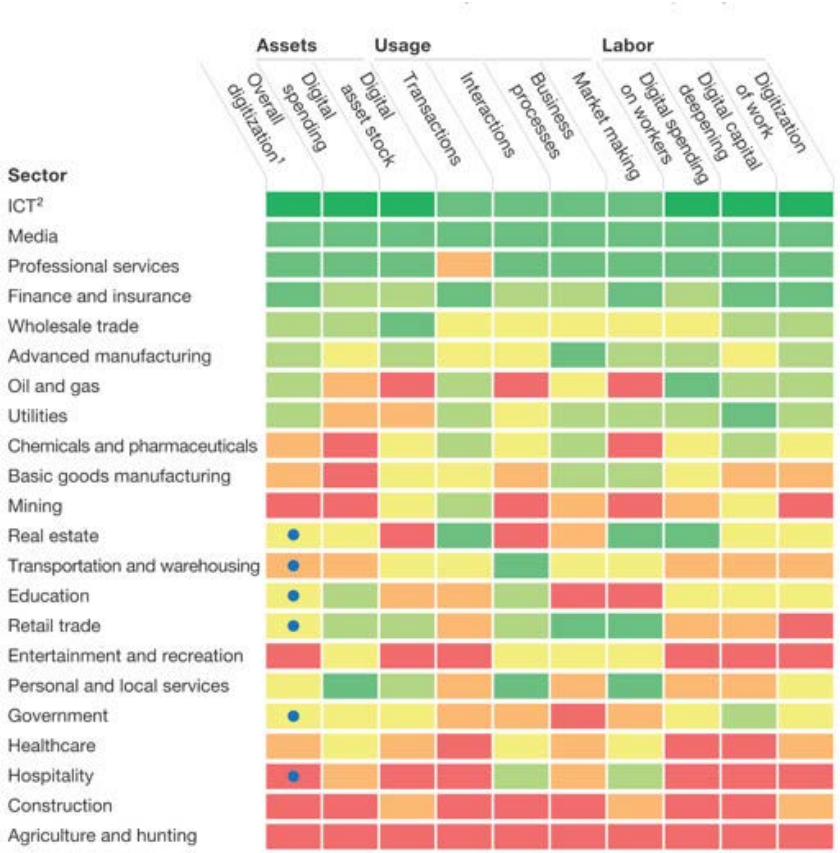
Open APIs
B2B Partner APIs
Internal Enterprise APIs

Imagine your car… **without a speedometer**


Assets
Usage
Labor
Overall digitization[1]
Digital spending
Digital asset stock
Transactions
Interactions
Business processes
Market making
Digital spending on workers
Digital capital deepening
Digitization of work
Sector
ICT[2]
Media
Professional services
Finance and insurance
Wholesale trade
Advanced manufacturing
Oil and gas
Utilities
Chemicals and pharmaceuticals
Basic goods manufacturing
Mining
Real estate
Transportation and warehousing
Education
Retail trade
Entertainment and recreation
Personal and local services
Government
Healthcare
Hospitality
Construction
Agriculture and hunting

Tech is the answer, but what is the question?

Urban-tech investment 2016-2018

Year	Urban-tech investment	Total global venture-capital investment
2018 (to date)	$13.9 billion (11.3%)	$123.1 billion
2017	$44.1 billion (22.8%)	$192.7 billion
2016	$18.8 billion (13.2%)	$140.6 billion
Total	**$76.8 billion (16.8%)**	**$456.4 billion**

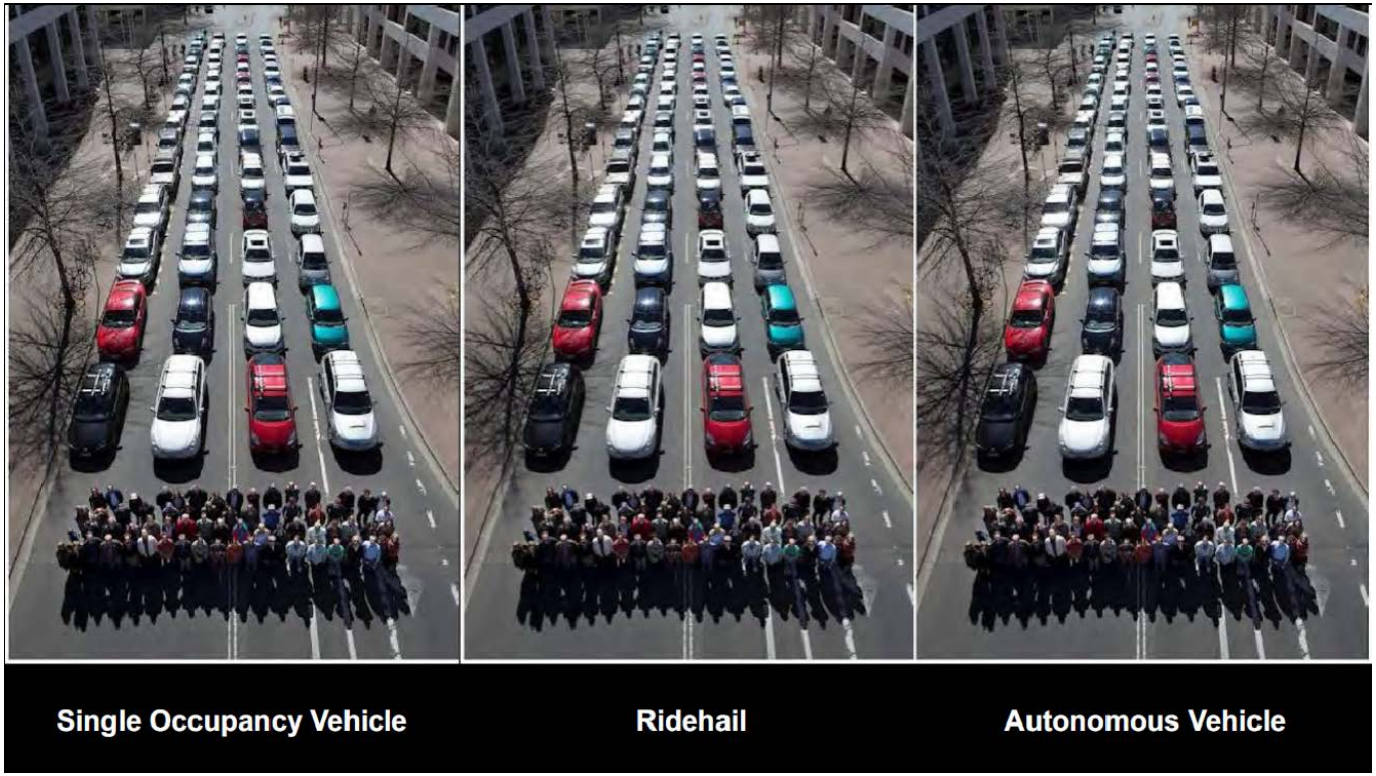
Leading urban-tech sectors 2016-2018

Sector	VC investment	Share of investment	Number of startups	Share of startups
Mobility / ride-hailing	$46.8	61.0%	258	19.2%
Food delivery	$14.6	19.0%	410	30.6%
Co-living & co-working	$6.4	8.3%	109	8.1%
Bikes and scooters	$6.4	8.3%	102	7.6%
Smart cities	$5.6	7.3%	154	11.5%
Real estate tech	$3.2	4.2%	117	8.7%
Construction technology	$2.5	3.2%	192	14.3%
Total	**$76.8**		**1342**	

But

Autonomous Vehicles

Will save us, right?

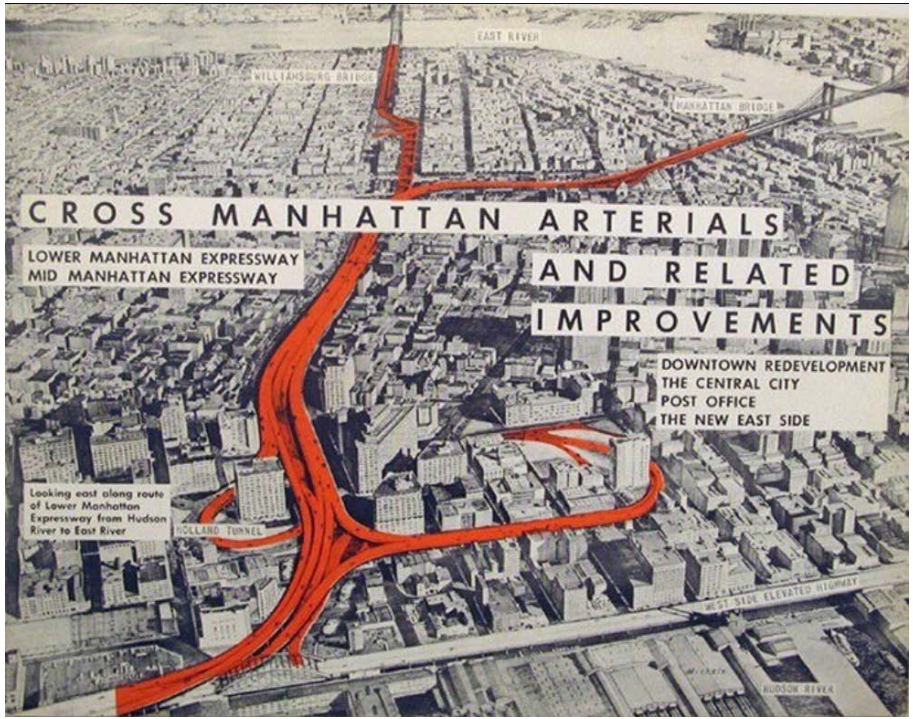

Single Occupancy Vehicle
Ridehail
Autonomous Vehicle

Bus | Bicycle | Single Occupancy Vehicle

What are today’s most important Urban problems / opportunities

What kind of urban technology will shape our cities?

What can today's innovator learn from Urban renewal and high modernism



China's top tech firms launch smart city initiative

Ping An, Alibaba, Tencent and Huawei are leading a smart city initiative in China, with 500 cities throughout the country on board.

China's smart city initiative is taking a collaborative approach, involving the country's top tech firms.

Trends in Housing Tech and Innovation

- Design and Construction
  - Design and Building Coordination

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Trends in Housing Tech and Innovation

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THANK YOU – Any questions?