



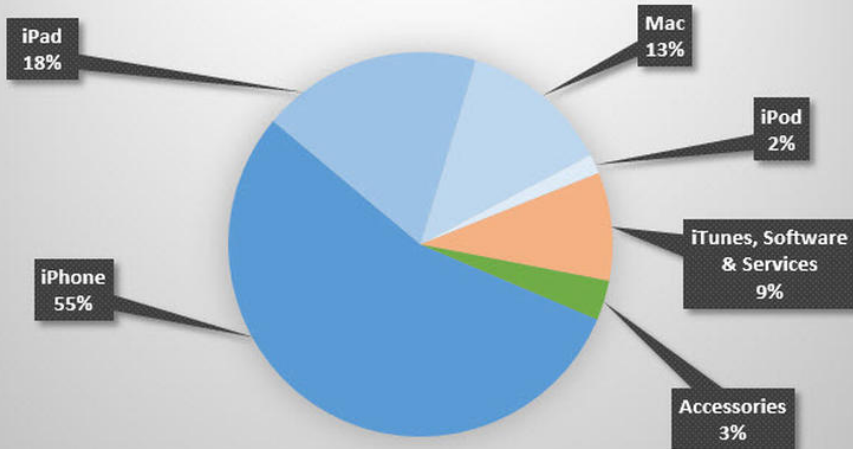
# Managing Data & Databases

Session 5

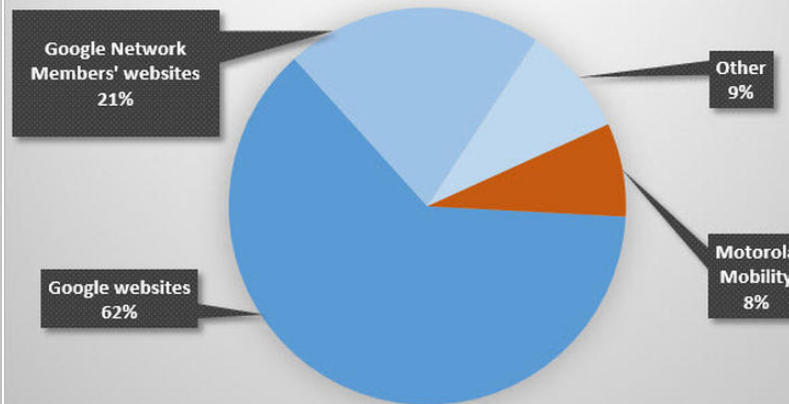
Data-driven business models

Does that tell you anything about the products and the conduct of these companies?

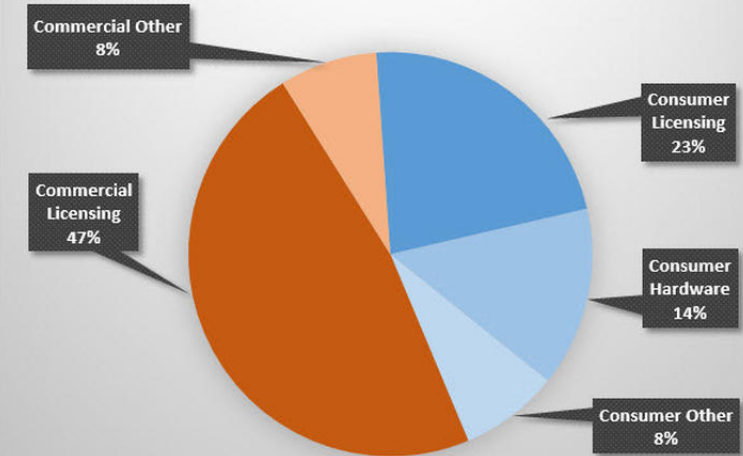
Where does Apple's revenue come from?



Where does Google's revenue come from?



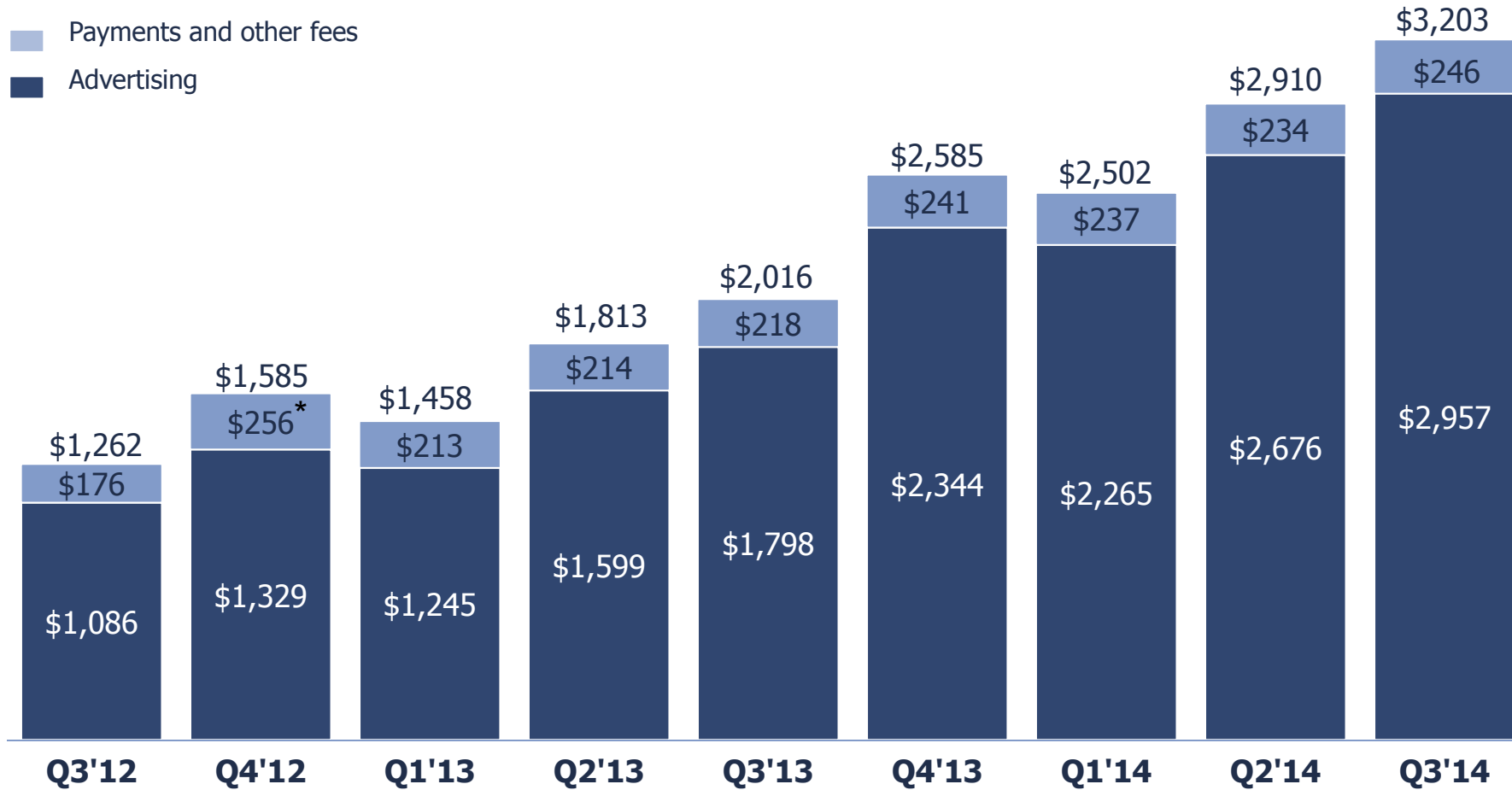
Where does Microsoft's revenue come from?



# Revenue

## In Millions

Payments and other fees  
Advertising



What  
about  
this  
one?

3

\*In the fourth quarter of 2012 we recognized revenue from four months of Payments transactions for accounting reasons detailed on pages 47 and 48 of our Form 10-K filed on February 1, 2013.

Source: Facebook

Original article:

<http://files.shareholder.com/downloads/AMDA-NJ5DZ/3618325453x0x789303/06decc7b-0588-4a52-a8dd-3a591ab02395/FBQ314EarningsSlides20141027.pdf>

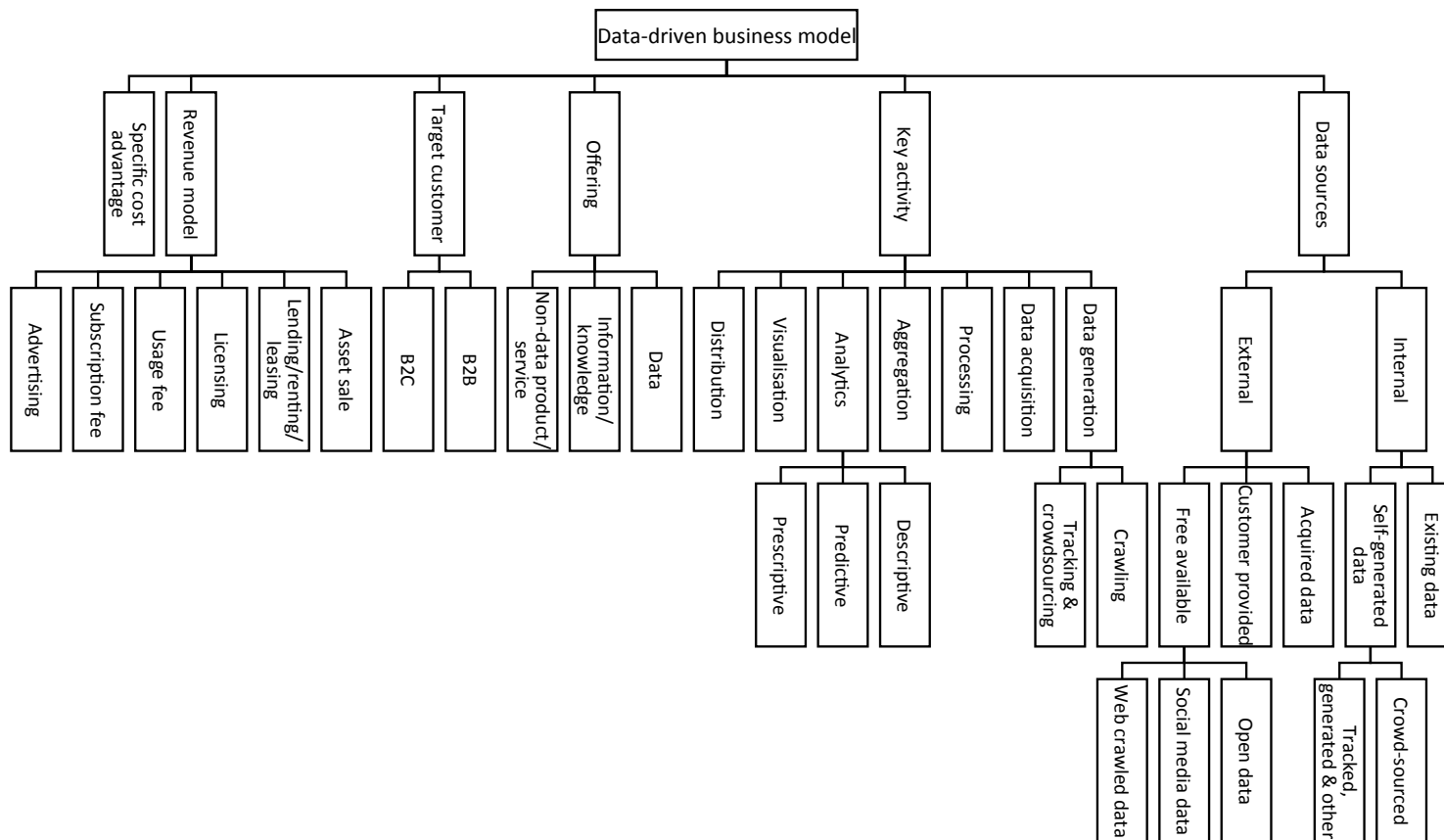
facebook

# What is a business model?

- A mediating construct between technology and economic value \*
- The functions of a business model \*
  - articulate the value proposition based on the offered technology
  - identify a market segment and a revenue generation mechanism
  - define the structure of the value chain within the firm and determine the complementary assets needed
  - estimate the cost structure and profit potential
  - describe the position of the firm within the value network linking suppliers and the customers
  - formulate the competitive strategy of the firm vis a vis rivals

\* Chesbrough, H., & Rosenbloom, R. S. (2002). The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change*, 11 (3), 529–555. doi:10.1093/icc/11.3.529

# What about in data-driven startups?



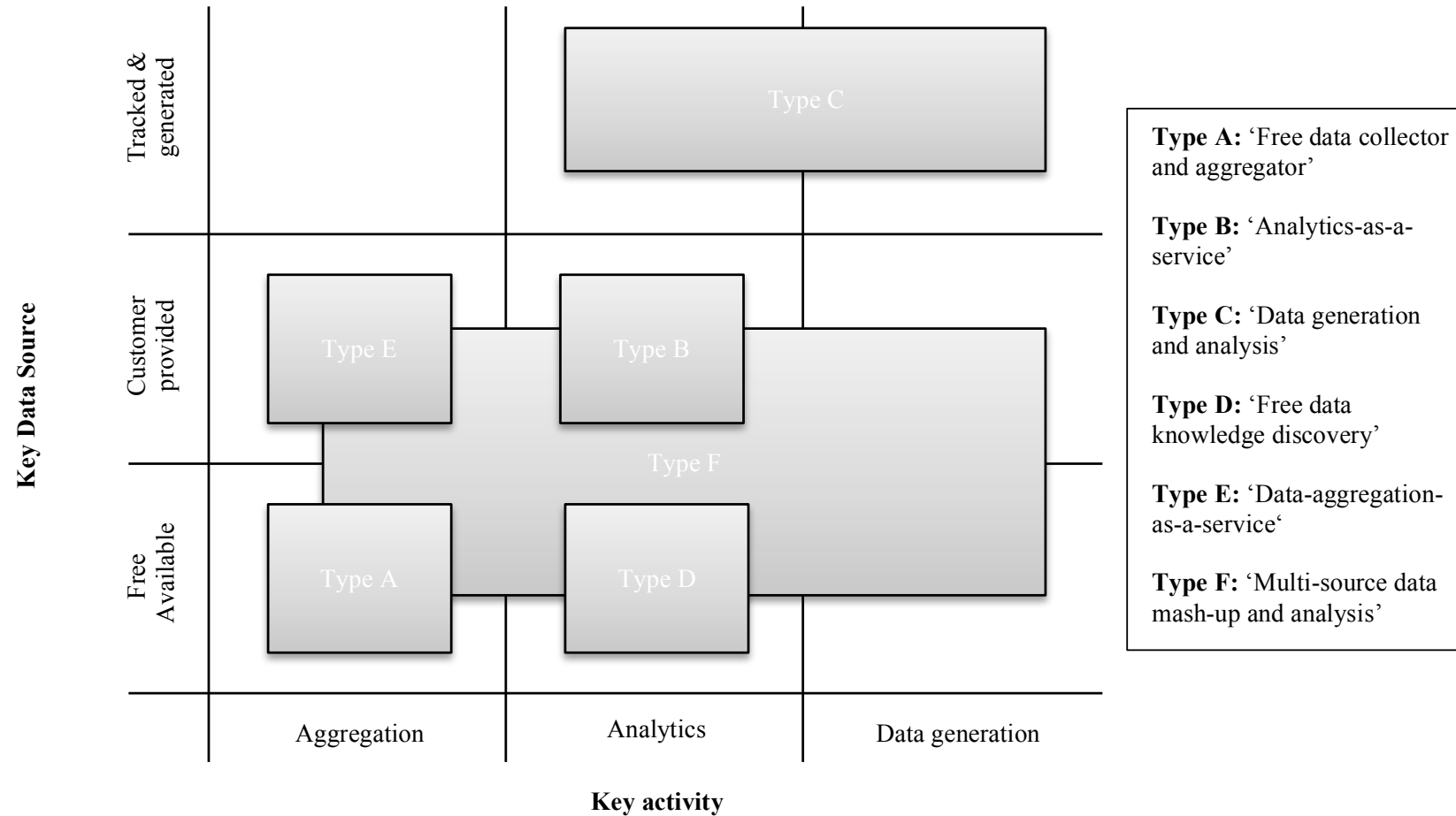
Source: Hartmann, P. M. et al (2014). Big Data for Big Business? A Taxonomy of Data-Driven Business Models Used by Start-Up Firms. Cambridge Service Alliance working paper.

DDBM Dimensions				DDBM Cluster Types Percentages						
				A	B	C	D	E	F	
				Free data collector and aggregator	Analytics-as-a-service	Data generation and analysis	Free data knowledge discovery	Data-aggregation-as-a-service	Multi-source data mash-up and analysis	
Share of companies				18%	29%	17%	15%	6%	15%	
Data Source	Internal	Existing data		0%	0%	0%	0%	0%	0%	
		Self-generated data	Crowd-sourced	18%	0%	31%	0%	17%	7%	
			Tracked, generated and other	6%	11%	88%	0%	0%	21%	
	External	Acquired data		12%	11%	0%	7%	0%	21%	
		Customer provided		24%	100%	13%	0%	100%	79%	
		Free available	Open data	100%	11%	19%	100%	0%	93%	
			Social media data	12%	4%	0%	7%	0%	7%	
			Web crawled data	71%	11%	13%	50%	0%	57%	
		Key Activity	Data generation	Crawling		35%	0%	6%	50%	0%
	Tracking & crowdsourcing			12%	4%	100%	0%	17%	29%	
	Data acquisition		24%	21%	6%	21%	17%	29%		
	Processing		100%	18%	0%	0%	100%	93%		
Aggregation			12%	82%	69%	86%	0%	93%		
Analytics	Descriptive		0%	50%	13%	21%	0%	14%		
	Predictive		0%	11%	6%	7%	0%	7%		
	Prescriptive		24%	39%	44%	7%	33%	36%		
Visualisation			100%	36%	19%	29%	83%	50%		
Distribution			35%	0%	6%	50%	0%	43%		
Offering	Data		12%	0%	0%	0%	0%	14%		
	Information/ knowledge		88%	100%	88%	100%	83%	93%		
	Non-data product/service		0%	0%	13%	7%	0%	0%		
Target Customer	B2B		71%	96%	63%	86%	83%	86%		
	B2C		47%	18%	50%	21%	33%	21%		
Revenue Model	Asset Sale		0%	0%	19%	0%	0%	0%		
	Lending/renting/leasing		6%	0%	0%	0%	0%	0%		
	Licensing		0%	0%	0%	0%	0%	0%		
	Usage fee		12%	14%	13%	21%	0%	0%		
	Subscription fee		47%	46%	44%	64%	33%	36%		
	Advertising		12%	0%	6%	7%	0%	7%		

Anything surprising?  
Important?  
Interesting?

Source: Hartmann, P. M. et al (2014). Big Data for Big Business? A Taxonomy of Data-Driven Business Models Used by Start-Up Firms. *Cambridge Service Alliance working paper*.

## A DDBM Matrix



## Exercise

What data-driven business model gets you top funding?

Reference: <https://www.crunchbase.com/funding-rounds>