

# The Platform Revolution

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April 12, 2018

## Tom Goodwin

The world's largest taxi firm, Uber, owns no cars. The world's most popular media company, Facebook, creates no content. The world's most valuable retailer, Alibaba, carries no stock. And the world's largest accommodation provider, Airbnb, owns no property. Something big is going on.

## Erik PM Vermeulen

You either become a platform or you will be killed by one.

# TOYS 'R' US





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# Introduction to R

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## Course Description

In this introduction to R, you will master the basics of this beautiful open source language, including factors, lists and data frames. With the knowledge gained in this course, you will be ready to undertake your first very own data analysis. With over 2 million users worldwide R is rapidly becoming the leading programming language in statistics and data science. Every year, the number of R users grows by 40% and an increasing number of organizations are using it in their day-to-day activities. Leverage the power of R by completing this free R online course today!

### 1 Intro to basics

In this chapter, you will take your first steps with R. You will learn how to use the console as a calculator and how to assign variables. You will also get to know the basic data types in R. Let's get started!

VIEW CHAPTER DETAILS ▾

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This course is part of these tracks:

Data Analyst with R

Data Scientist with R

R Programmer

R Programming



Jonathan Cornelissen

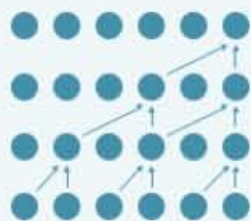
Co-founder and CEO of DataCamp

## Hands-On Data Science Education

Learn the basics to confidently start a new career or upgrade your skills.

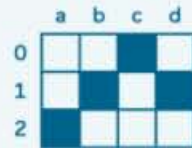


### Tracks



#### Machine Learning

Machine learning is the hottest field in data science, and this track will get you started quickly.



#### Pandas

Short hands-on challenges to perfect your data manipulation skills



#### Data Visualisation

Visualisation is one of the most versatile skills in data science. Make insightful and beautiful graphics to see what's happening



#### SQL

Learn SQL for working with databases, using Google BigQuery to scale to massive datasets.



#### R

Learn the language designed for data analysis. This track includes data set-up, machine learning and data visualization.

## Some numbers

- ▶ According to an infographic from the Berkeley School of Information, one in 10 Americans use a dating site or app, and 23% have found a long-term partner or spouse while using them. Even more surprising, 11% of American couples — together for 10 years or less — met online through one of these services.
- ▶ In 2005, 47% of those polled claimed that online dating allows you to find better matches. In 2013, that number increased to 53%. The number of people that claim meeting partners online is a good way to find someone also increased, from 44% in 2005 to 59% in 2013.
- ▶ A French reporter for The Guardian requested access to personal data collected during her use of Tinder. She received about 800 pages, including basic info, interests, and preferences, and even chat history.

# The platforms

- ▶ A **digital platform** is a mixture of software, hardware, operations, and networks. The **algorithmic revolution** and cloud computing are the foundations of the platform economy.
- ▶ A radical reduction in barriers to entry has come since costs drop through the use of **open-source software, cloud storage and computing**.
- ▶ Computing and the applications and platforms it facilitates are now available as an **operating expense** rather than a capital expense.



## Is this about big data?

- ▶ In general, you don't need so many data to start a platform.
- ▶ But your data can get bigger as the number of users increases and the users develop their activity.
- ▶ Big data allows the platform company to apply algorithms that can be critical for business.

What's the secret to Google's success? We don't have better algorithms than anyone else; we just have more data.

## How relevant are the algorithms?

- ▶ Zillow: The algorithm is a nice to have.
- ▶ Amazon: Recommendation algorithms are not the core business but help to increase sales.
- ▶ eHarmony: The algorithm is the product.



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This map shows the New York City metropolitan area, including the Hudson River, New York State Thruway (I-287), and surrounding suburbs like Westchester and Dutchess counties. The map includes labels for various towns and cities, as well as major roads and landmarks.



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Editorial Reviews

Review

"Thorough and often provocative."  
- **Jeremy G. Philips, *The Wall Street Journal***

"An authoritative guide to the role of online platforms: what they are, how they work, and what they mean for business and economics. *Platform Revolution* demystifies the concept by providing clear prose, insightful examples, and practical lessons."  
- **Hal Varian, chief economist, Google, and author of *Information Rules***

"Platforms have transformed the economy over the last two decades, but the biggest effects are yet to come. *Platform Revolution* provides the first comprehensive framework for platform strategy and for predicting the winners and losers of future disruptions."



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4 April



Julia

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# The platform revolution (1)

- ▶ We are in the midst of a reorganization of our economy in which the platform owners are seemingly developing power that may be even more formidable than was that of the factory owners in the early industrial revolution.
- ▶ Platforms are already having powerful consequences for society, markets and firms, and we are unclear about their dynamics and directions.

## The platform revolution (2)

- ▶ These platforms are in many cases disrupting the existing organization of economic activity by resetting entry barriers, changing the logic of value creation and value capture, playing regulatory arbitrage, repackaging work, or repositioning power in the economic system.
- ▶ In some cases, the platform isn't just disruptive, it's killing long-lasting and successful business models. Amazon shook up the retail industry, Napster and iTunes decimated the music industry, Uber and Airbnb are radically changing the transportation, hotel and travel industries.

# The unicorns

- ▶ **Unicorns** are private startup companies that have achieved a valuation of \$1 billion or more without going to public capital markets.
- ▶ A review of the 115 companies listed as Unicorns by CB Insights in June 2015 found that 80 of these companies (70%) are platform companies.

# Platform value creation

- ▶ **Transaction platforms.** Facilitate transactions between individuals and/or organizations that would otherwise have difficulty finding each other. Examples: Uber and eBay.
- ▶ **Innovation platforms.** Technological building blocks that are used as a foundation on top of which a large number of innovators can develop complementary services or products. These complementary innovators can be anyone, anywhere in the world, and together they form an **innovation ecosystem** around the platform. Example: Apple Store, Amazon Cloud Services.



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# Why do platforms win? (1)

- ▶ **Network effects.** There are two kinds of network effects: (a) direct effects (more users beget more users on the same side of the platform) and (b) indirect effects (more users of one side attract more users on the other side).
- ▶ **Digital.** Platforms capture, transmit and monetize data over the Internet. They may not be purely digital, including physical elements in the product offering, but they take advantage of pervasive Internet connectivity.
- ▶ **Reduce friction.** While there is always friction associated with transactions between buyers and sellers, by building new software and harnessing the speed and scale of the Internet, platforms help reduce that friction.

## Why do platforms win? (2)

- ▶ **Connectivity** offers users the possibility to share reviews, experiences and any other information. The technology that drives the platform also connects developers, creators on one side and users on the other.
- ▶ **Choice**. Platforms often help promote, find and compare products and services. A seamless online access to a platform in combination with user reviews becomes more important in the choice process than brand image or loyalty. As a result, branding matters less than delivering constant innovation.





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## Reaction of incumbent firms

- ▶ Building a platform from scratch (Johnson Controls and Panopix).
- ▶ Building platform capabilities through acquisitions (Daimler purchase of RideScout and MyTaxi).
- ▶ Building platforms through alliances (Walgreens partnering with MDLIVE).

# Disruption backwards

- ▶ Platform companies disrupt” traditional ways of doing things by empowering users in new ways.
- ▶ These same platforms are increasingly disrupted by users demanding a better level of performance than the platform and its products or services can currently offer.

## Don't ask permission, ask forgiveness

- ▶ Platform entrepreneurs increasingly believe that if they possess a first-mover advantage. They can, in fact, remake existing law by creating new practices on their platforms that establish new norms of behaviour.
- ▶ Government rules will influence how the new technologies are deployed and their consequences, but in a platform economy, government decisions may be constrained by the “facts” in the software.
- ▶ Although public policies are obviously important, corporate strategies also have far-reaching effects. Do companies view workers only as costs to be contained or as assets to be developed and promoted? And equally important, are those assets directly tied to the firm? Who should bear the costs of their retention and upgrading?







