

# Below the API

Tom Sharman, Johan Wilhelmsson & Ade Adegoke

**Isaac Asimov**, Author and Professor (1920 – 1992)

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The world of A.D. 2014 will have few routine jobs that cannot be done better by some machine than by any human being. Mankind will therefore have become largely a race of machine tenders.

# Below the API Overview

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Replacing the Middle Management with API's.

Technology can be more efficient and effective than humans and therefore are replacing them.

Companies such as Google & Uber have adopted this.

# Case Study

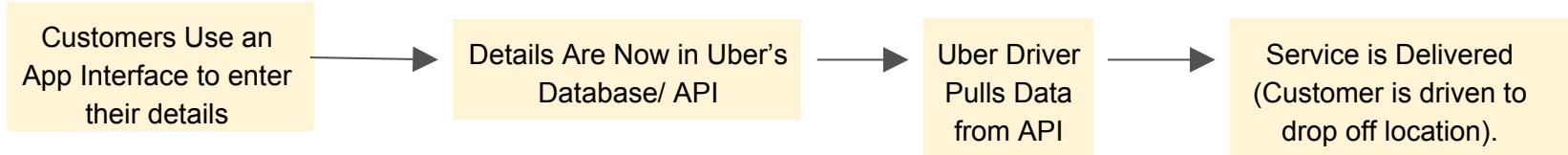
Uber uses API's for make booking  
Taxi's more efficient and cheaper  
for everyone.

The only two people involved in  
the service directly are the Driver  
and Customer.



# Uber's API

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# Google Cars & Uber Bots

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In 2013 Google invested \$245 million in Uber. It was seen as one of Google's largest investment.

It is believed that Google invested in Uber in a bid to develop its driverless cars project.

# Google Cars

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Google over many years now have made no secret to create a driverless car and change transportation system, with its Google X Research Lab.

Google may also have a ride-sharing-app (which is currently being used by Google employee's) similar to Uber's app.

**Does this suggest Google are planning to Rival alongside Uber as an increase in bad press continues to dominate the industry?**

# Uber Bots

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In recent months, the two companies have become competitors, with Uber recruiting Carnegie Mellon's artificial intelligence labs as it looks to build its own fleet of self-driving cars to compete with Google's.

# Peter Reinhardt (Co-Founder & CEO, Segment)

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Once you introduce the software layer between ‘management’... and the human workers below the software layer... there’s no obvious path upwards. In fact, there’s a massive gap and no systems in place to bridge it.

# 'Below the API' Examples

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Uber (Taxi)

Amazon (Drone Delivery)

TaskRabbit (Handyman, Moving, Cleaning)

99Designs (Graphic Design)

HomeJoy (Cleaning)



**TaskRabbit**



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# 99Designs

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# Do people want Below The API services?

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Homejoy, a cleaning service that adopted the ‘Below the API’ approach shut down after receiving very little crowdfunding. Much to the disappointment of Founders & Investors.

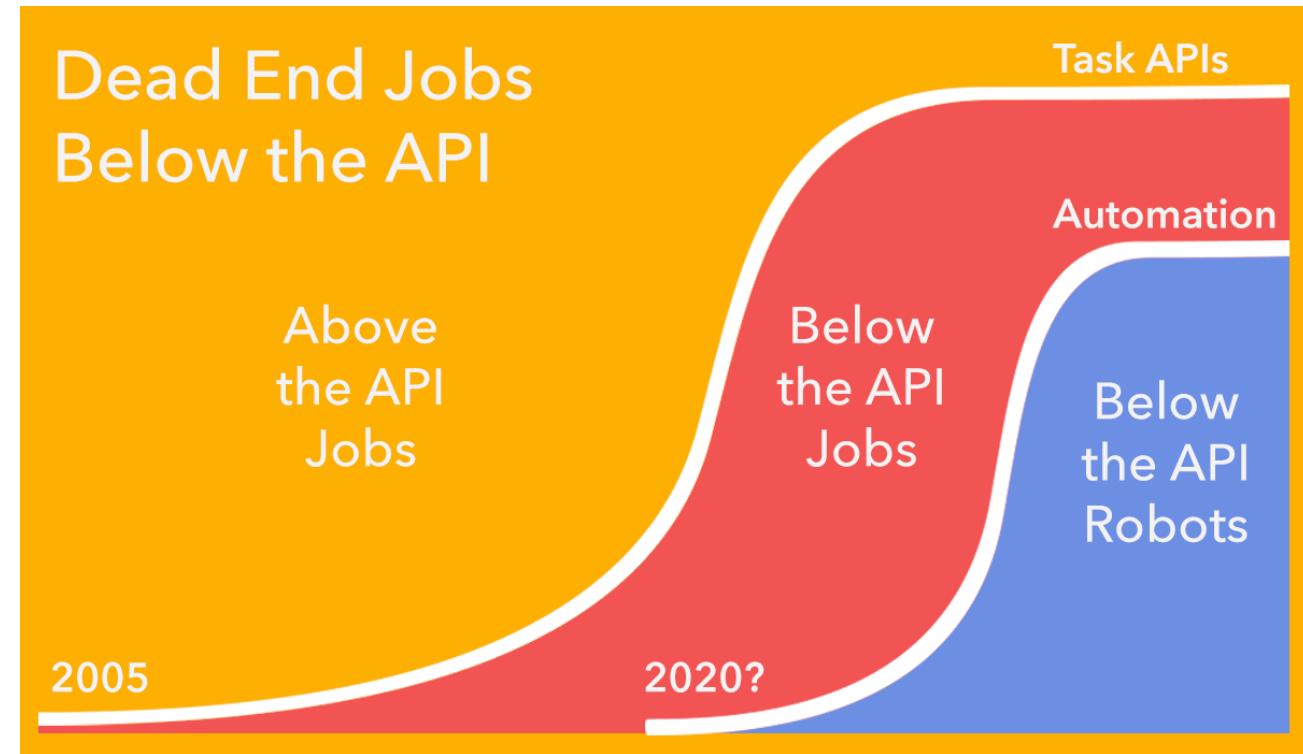
Does this suggest that people see this as wrong to replace humans for the founders benefits to cut costs and are therefore turning on Startups by not backing their crowdfunds?

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# Future...

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According to Carl Benedict Frey and Michael A. Osborne, two researchers at Oxford who researched 702 current occupations, approximately half (47 percent) are at risk of going the way of the telephone operator within just a decade or two.



# Future Professions

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Medical diagnosing

Car mechanics

Web Design



Peter Reinhardt (Co-Founder & CEO, Segment)

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Self-driving cars and Drone delivery  
are certainly on the way.



# Class Questions

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Can API's truly replace a human?

Is it morally correct to replace humans with computer software?

What professions do you believe can be replaced by software?

# Resources

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**Forbes:** <http://www.forbes.com/sites/anthonykosner/2015/02/04/google-cabs-and-uber-bots-will-challenge-jobs-below-the-api/>

**Rein PK Blog:** <http://rein.pk/replacing-middle-management-with-apis/>

**QUARTZ:** <http://qz.com/498820/uber-is-giving-carnegie-mellons-robotics-lab-5-5-million-after-ransacking-it-for-talent/>

**Bloomberg:** <http://www.bloomberg.com/news/articles/2015-02-02/exclusive-google-and-uber-are-going-to-war-over-taxis>

**Business Insider:** <http://uk.businessinsider.com/microsoft-and-google-are-uber-investors-2015-7?r=US&IR=T>

**Forbes (2):** <http://www.forbes.com/sites/sap/2015/04/12/when-machines-replace-middle-management/>

**ReCode:** <http://recode.net/2015/07/17/cleaning-services-startup-homejoy-shuts-down-after-battling-worker-classification-lawsuits/>

**Wikipedia:** [https://en.wikipedia.org/wiki/Isaac\\_Asimov](https://en.wikipedia.org/wiki/Isaac_Asimov)

**Segment's 99Designs API Remake:** <https://github.com/segmentio/nightmare-swiftly>

# Thank You