

# The Evolution of Industries



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While VCs seek the next hot thing, great returns will be realized from the evolution of existing industries.

## Background

By all accounts, Henry Ford did not invent the automobile. But by combining the best available engine technology with operational excellence he pioneered the modern automobile industry. In 1908 he introduced the Ford Model T and by 1918 it accounted for half of all cars on the streets of the United States.

Fast forward a century later and the founder of Uber once again upended the transportation industry. Similar to Ford, Uber did not invent the mobile phone or the dispatch system or the GPS or maps. But, through valiant execution, the company leveraged these newish technologies to transform an industry that was large yet forgotten by most investors—short of mega-medallion owners in a handful of US cities. **We call this process the Evolution of Industries.**

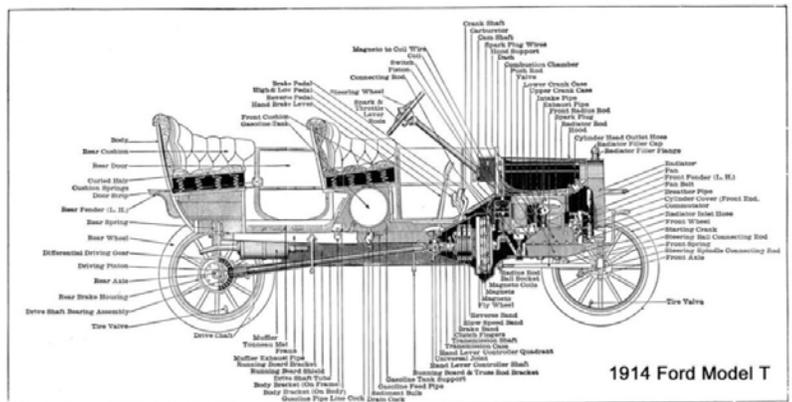
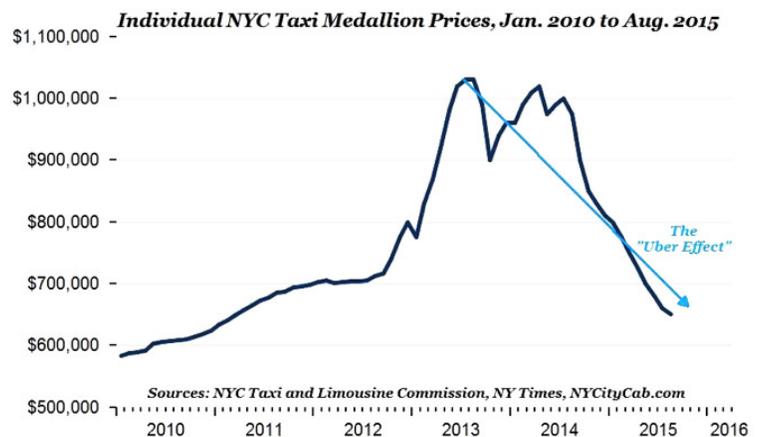


Fig. 468.—Side Sectional View of the Ford Model T Motor Car, the Most Widely Used Automobile in the World.

## How it happens

The Evolution of Industries happens when technical innovation is paired with operational excellence to transform a large, often antiquated, industry. Ford, Microsoft, Uber, Square and Airbnb are all examples of companies that fit in the Evolution of Industries model. The goal of these companies was **not technical innovation but rather mass adoption**. For Ford, it was an affordable automobile. For Microsoft, a PC on every desktop. For Square and Airbnb, it was making small merchant credit card payments and couch surfing mainstream.



EOI is about **mass adoption**

EOI is about the **democratization of technology**



The first 10%: Brick and mortar merchants accept credit cards



The remaining 90%: Everyone accepts credit cards



The first 10%: Call a number to order a taxi



The remaining 90%: order with a click of your thumb

EOI is about **altering existing business models**

EOI is about **driving new capabilities**



The first 10%: Only large farmers can afford precision agriculture



The remaining 90%: All farmers able to benefit from data analytics



The first 10%: Satellite imaging available to governments only

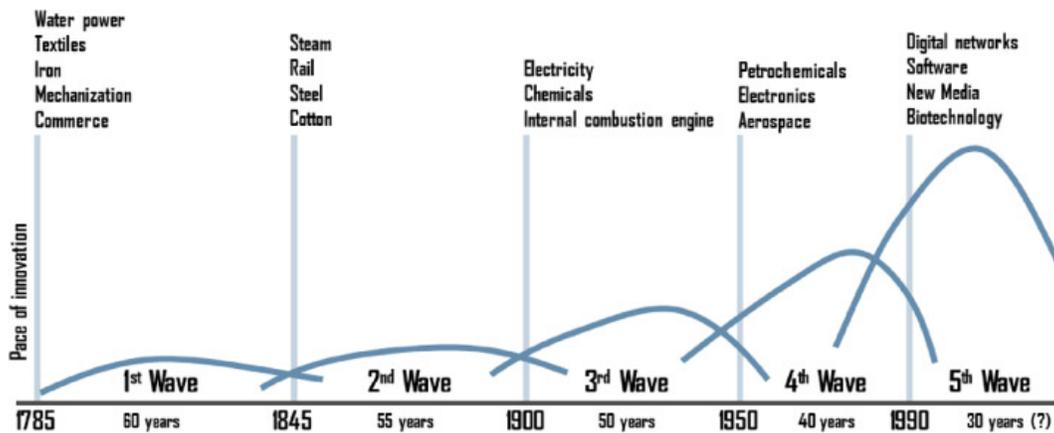


The remaining 90%: Satellite imaging available to all enterprises

The evolution of industries results in creative destruction of old business models and technology. In the case of Ford, it was the horse-drawn carriage: within a couple of decades from the introduction of the model T the number of horses in the united states dropped from 20M to 5M. In the case of Microsoft, it was the typewriter which has all but disappeared. Similarly, the casualty from the growth of Uber we all know will be taxis. While the number of taxis in US remains the same, the price of a taxi medallion in New York City, the country's largest taxi market with over 13 thousand taxis, has dropped from \$1 million in 2015 to roughly \$500K in the span of less than a year.

## The cycles of innovation

To recognize the importance of the Evolution of Industries as an investment thesis, one has to recognize that the innovation driven economy is not linear or exponential but rather cyclical, an idea first pioneered by the Soviet economist Nikolai Kondratiev in the 1920s and brought to mainstream thought through the work of Joseph Schumpeter, the father of Creative Destruction theory.



The cycles or waves arise from the bunching of basic innovations that launch technological revolutions that, in turn, create leading industrial or commercial sectors. But the time between these technical innovations can take decades: it took about 50 years between the steam engine and the railway cycle, and almost 40 years between the petrochemical revolution of the mid-1960's till the IT revolution of the 2000's. **During the down cycles, value is most realized not through inventing new technologies but rather through the dissemination of the recently discovered technology into existing industries.** Thus it is not surprising that while one of the top performing investment of the past decades was Google, a technology company, the top performing series A investment of this decade is likely to be Uber, a technology company addressing a major customer pain-point by applying location based services technology pioneered by companies like Four Square to the transportation industry.

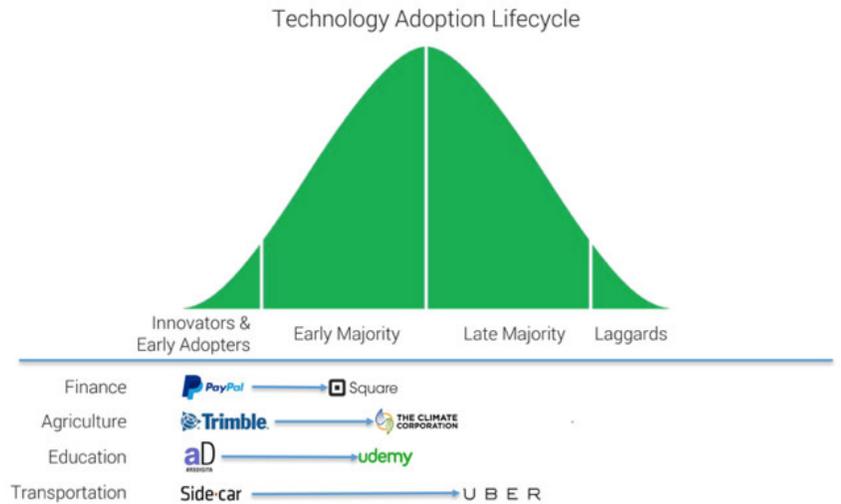
## How to win

Winning in the Evolution of Industries takes different forms. But an analysis of winning companies show a few key ingredients around founders, timing, and operational execution. As with all forms of innovation, the hero is the entrepreneur. But founders in the Evolution of Industries have particular traits

that set them apart: they are valiant operators as opposed to ardent technologists. And they are obsessed with mass adoption over a particular product vision. It's no surprise that Microsoft won over Apple in the PC battle of the 1980s because Bill Gates was obsessed with cost, which drove mass adoption, while Steve Jobs was obsessed with perfection. Similarly, Uber used its black car starting point to fund its launch into mass market ride-sharing.

Being a “first mover” is also not a requirement for companies focusing on the Evolution of Industries, in fact it can be a hindrance. Founders need to time the market, waiting on the technology to not only be available, but also widespread and cost effective. New technologies are frequently utilized as a solution looking for a problem to solve, but **the best founders focus on applying existing and well understood technology to markets that have been underserved** by prior advancements. Uber, for example, wasn't the first smartphone application to use GPS, nor was it the only ride sharing service. However, Uber created a brand that consumers flocked to, giving them access to a luxury experience by using existing technology to lower the price point.

Bringing disruptive technology to antiquated industries will also require entrepreneurs with strong operational backgrounds. Successful founders need to **combine industry knowledge with a focus on execution and scaling the product**. In the case of Square, accepting credit cards was not the challenge, instead it was scaling up their product and getting it into the hands of small merchants across the country. Their operational excellence allowed them to build valuable partnerships and distribute their product through high volume retail channels such as the Apple Store.



The best founders focus on applying existing and well understood technology to markets that have been underserved

But, through **great execution**, the company transformed the **payment industry**

Square did **not** invent the mobile phone or the credit card reader



We are in the downward leg of the 5th innovation wave, a wave enabled by core technologies from the genomics revolution and the now defunct Moore's Law. While there are opportunities to make money if you bet correctly on the rise of the 6th wave, we believe that over the next decade of outsized venture returns will be realized not by chasing the next hot shiny technology but rather by investing in EOI companies: **enterprises with the vision, focus on execution, and capacity to tackle large and often antiquated industries**—from education and healthcare to payment and oil and gas. Winning in this age will require operational excellence. But the rewards will merit the effort. Despite its massive growth, Information Technology today only accounts for 5% of the US GDP. It's time venture capitalist tackle the remaining 95%.

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