



We are an AI/Deep Learning Team with a focus on use-case oriented base research.

Research Center Data Science: 5 Professors for Deep Learning

DATEXIS

- 6 Phd+ 8 Graduate Assistants + Lecturer + Prof
- Data-Science Master (22 Students, > 300 applicants)
- Publications at TACL, CIKM, TheWebConf, COLING, ISWC, ...
- Industry support : Bayer SE, SAP SE, Zalando SE, Amazon, HERE, Merck SE, MunichRe, ExaSol, Krohne, Charité, Helios, Siemens, DFKI, ADA...
- 3x AI-Startups : Pyramics GmbH, Qualifiction GmbH, BeezData
- EU & National Funding (BMBF & BMWi)
- In the news: Handelsblatt, Deutschland Radio, Tagesspiegel, ...



Iurii Chernushenko, Alexander Löser, Stefan Edlich, Agathe Merceron, Petra Sauer, Torsten Kilius, Felix Kunde, Patrick Erdelt, Rudolf Schneider

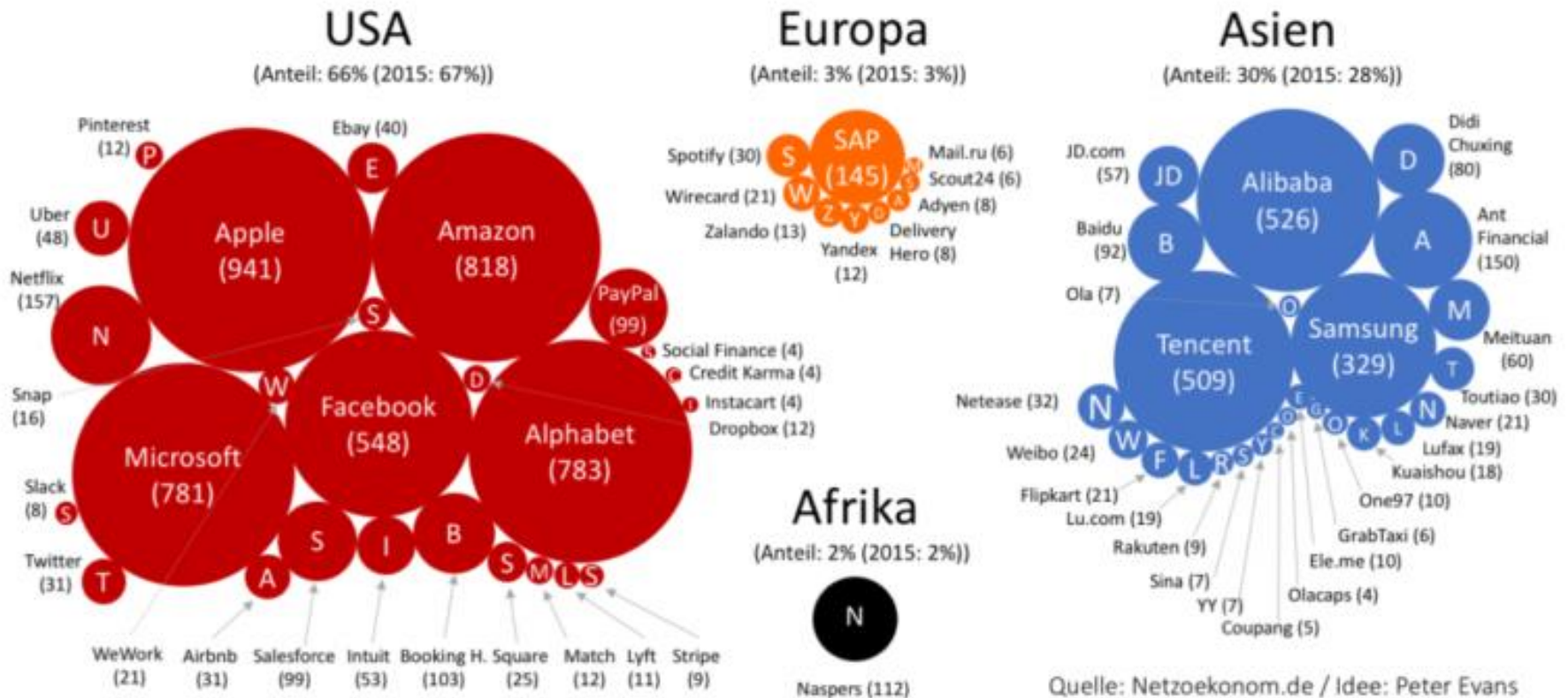
Alexander Löser

- Advisor for German AI Strategy (Plattform Lernende Systeme)
- Executive Board Member Einsteincenter Digital Future Berlin
- Executive Consultant (Board Level to Senior Management) for Zalando SE, eBay/mobile.de, MunichRe, Helios-Clinics, IBM Inc., Krohne Messtechnik, SpringerNature,...
- <https://www.linkedin.com/in/loeser/>

En par with Africa in Platform Economy?

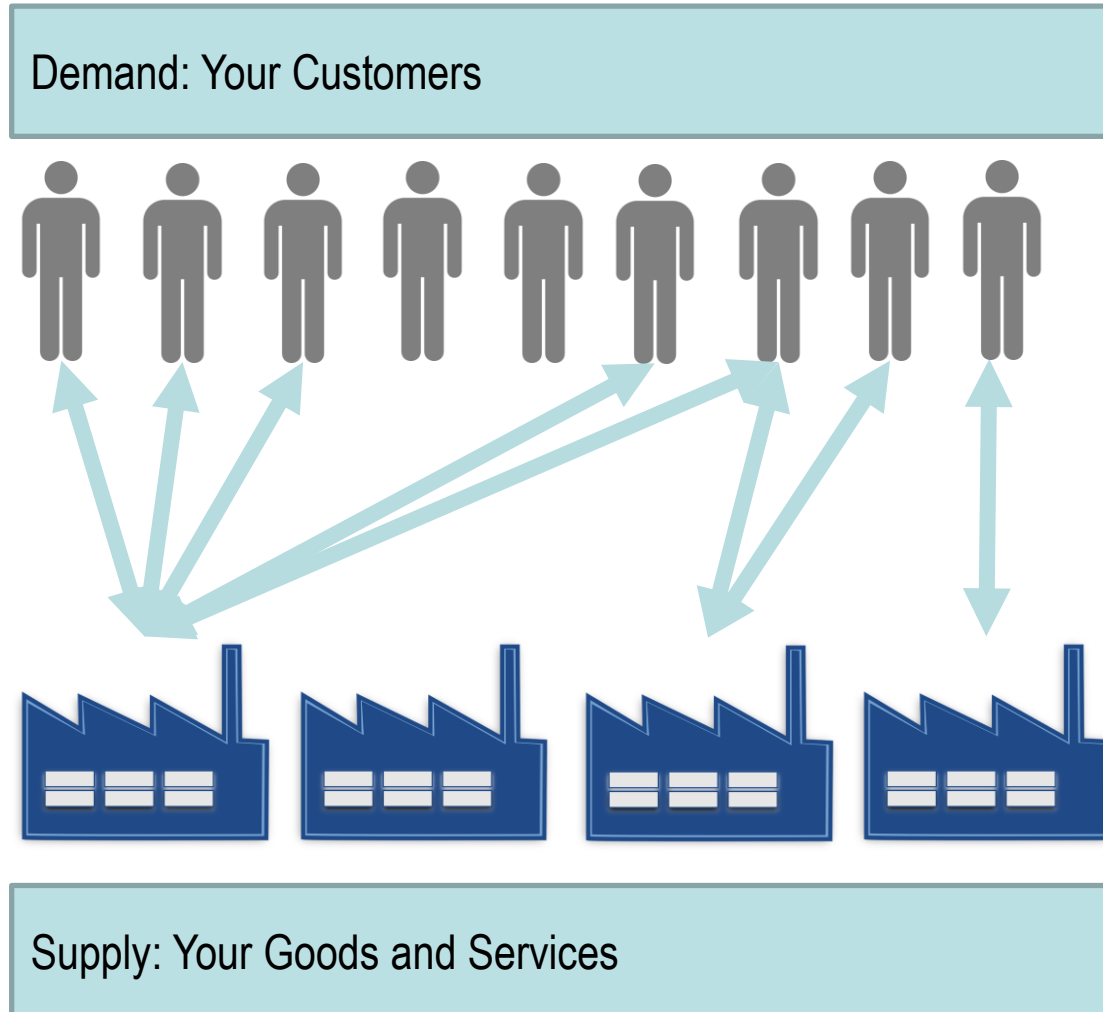
Die Unwucht der Plattform-Ökonomie

Die 60 wertvollsten Plattformen der Welt (Angaben in Mrd. Dollar (Börsenwert/jüngste Finanzierung, Juni 2018))





Today: Your Economy w/o Platform (oversimplified)

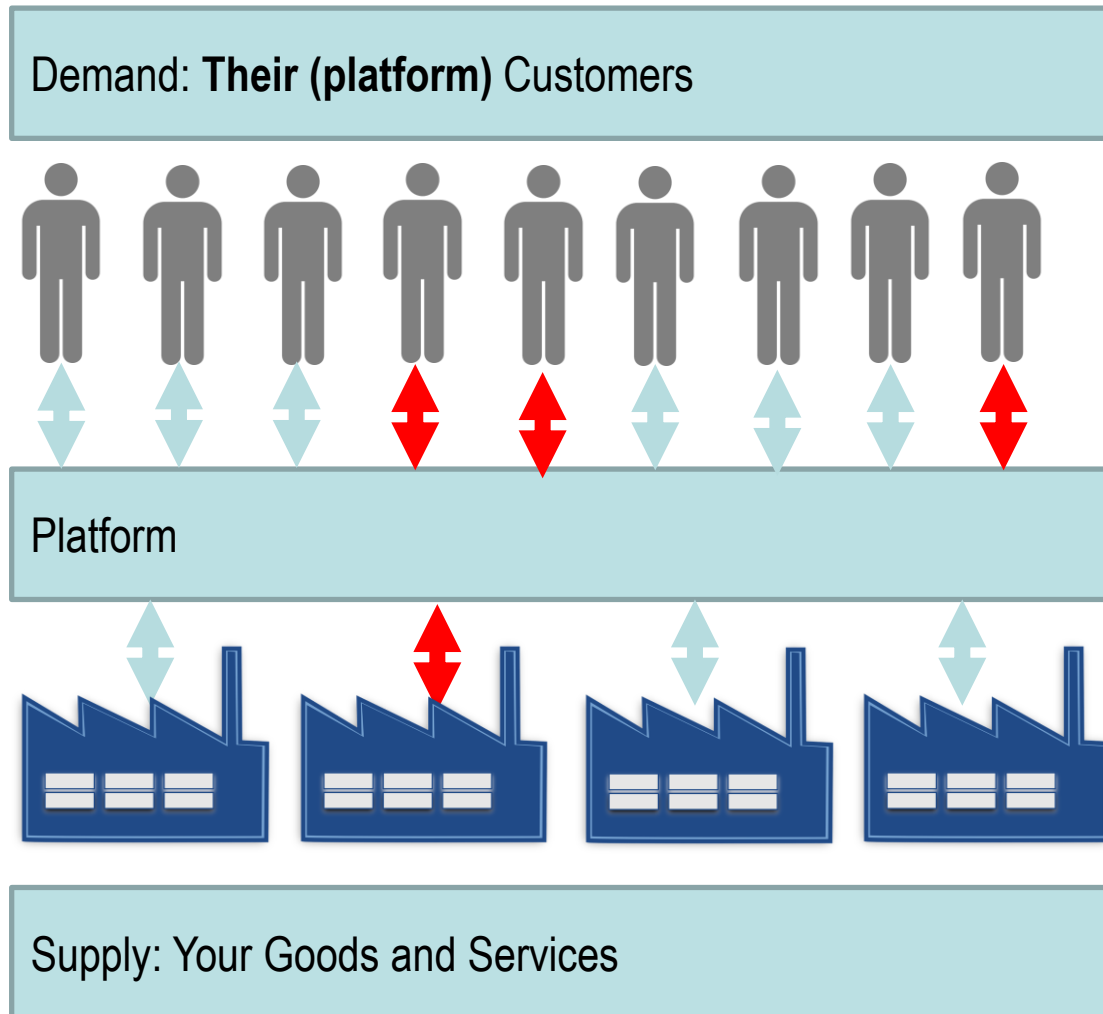


Your investment in reaching customers and markets





Platform Economy: They get your customers

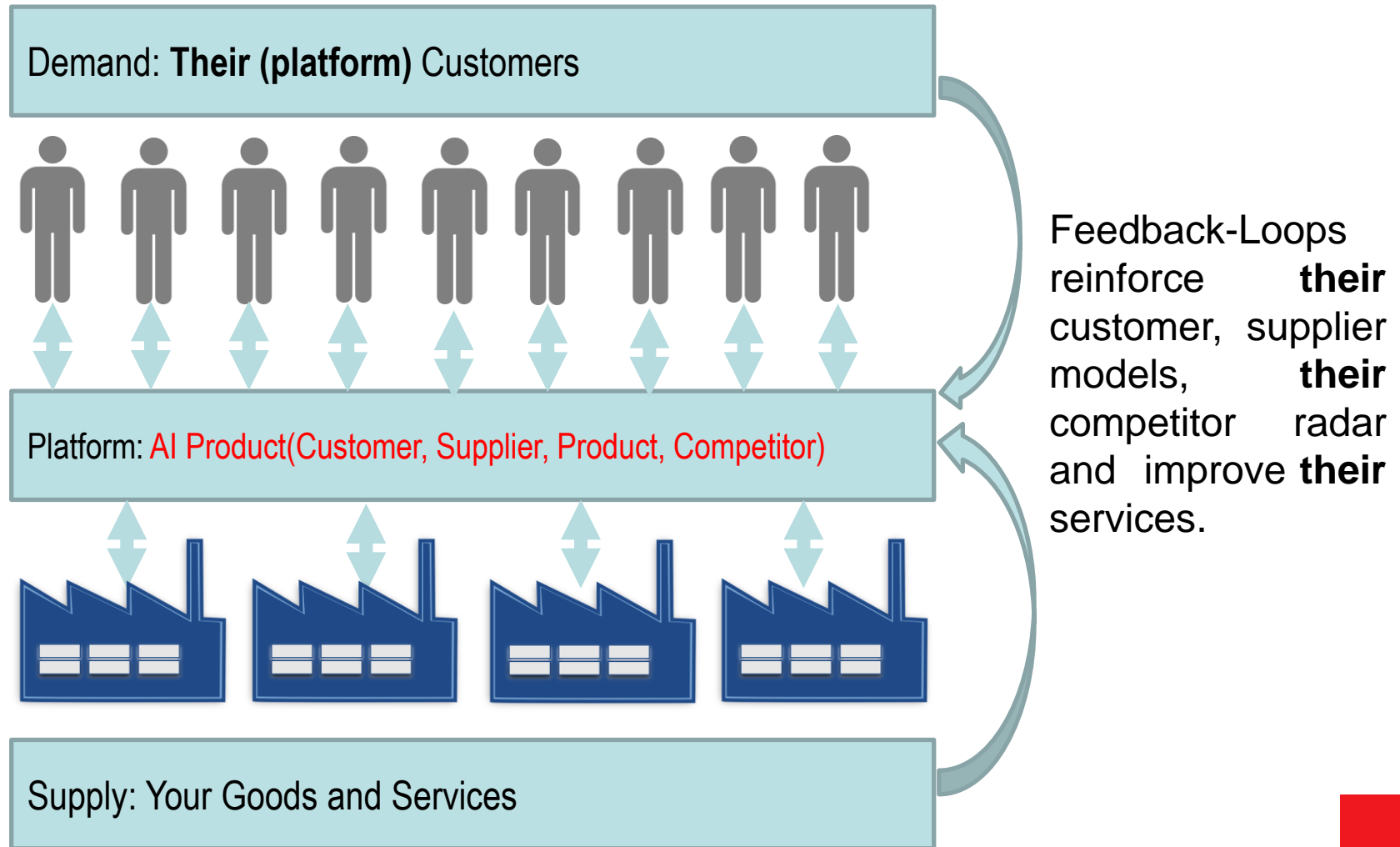


Platform investments to reach **their** (novel) customers and to drop transaction costs.

Your investment in reaching your **former** customers through the platform. Some suppliers reach **novel customers**.



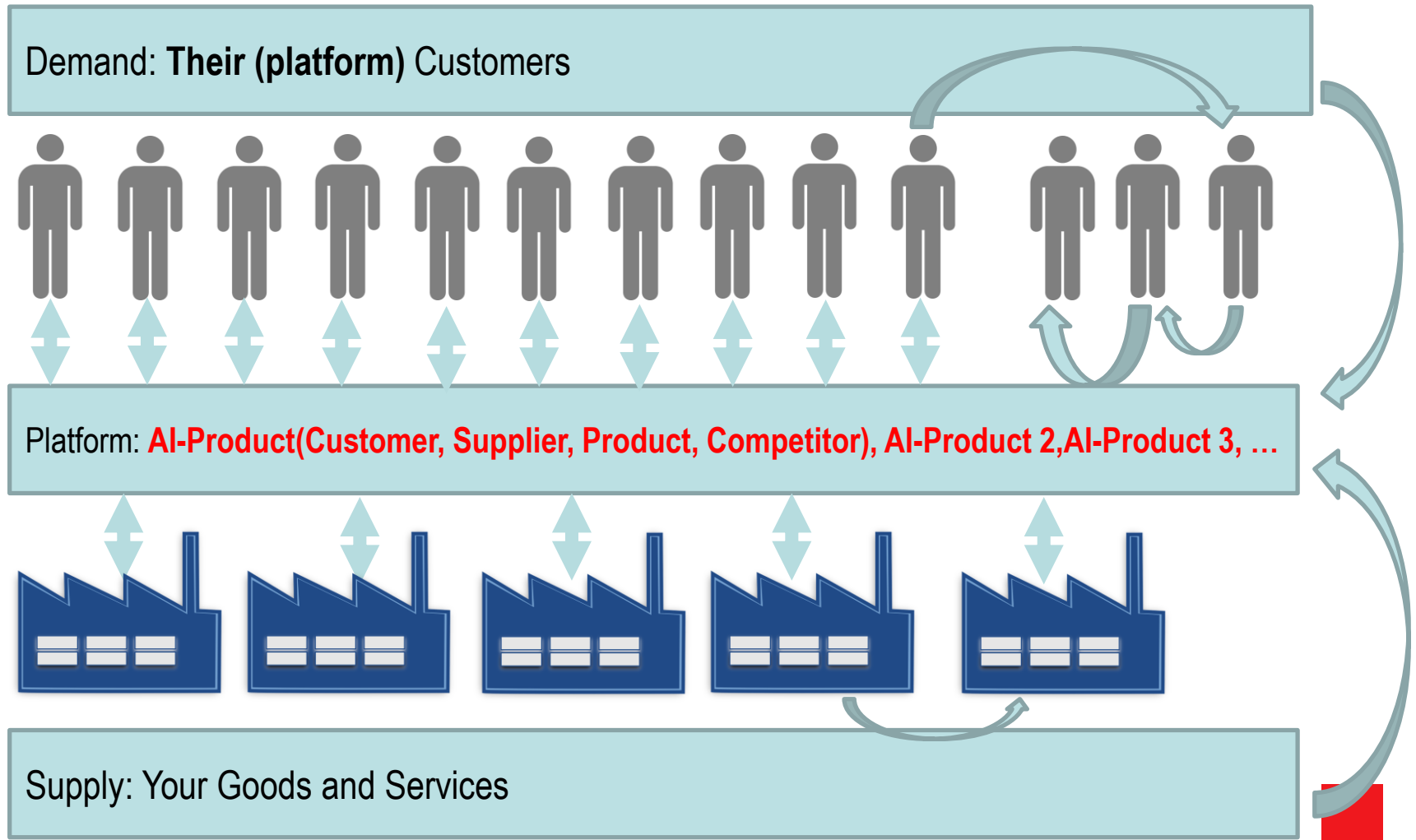
Platform Economy: Feedback-Loops





Network Effects, Scalability and new AI Products

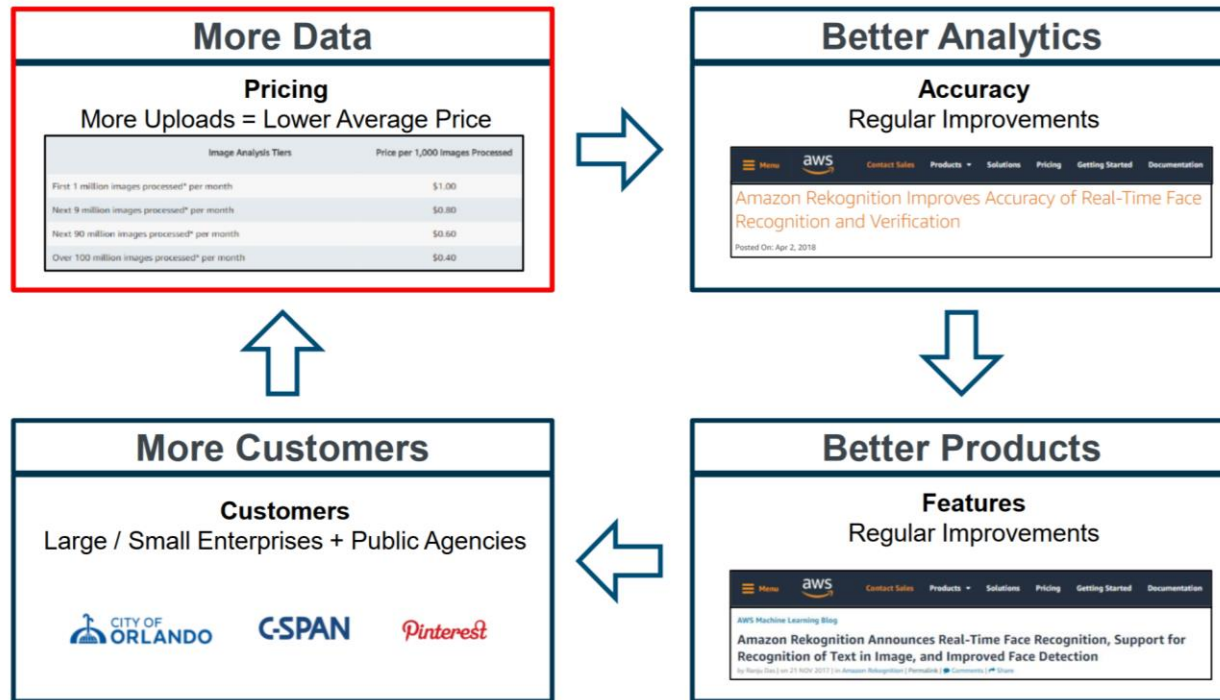
Improved Service Quality creates network effects, platform reaches new customers and scales. Feedback loops improves or creates AI Products.



Feedback-Loops + Profiles = More Income

...Data Volume = Foundational to Tool / Product Improvement...
Artificial Intelligence (AI) Predictive Capability

AWS 'Data Flywheel' – Amazon Rekognition*

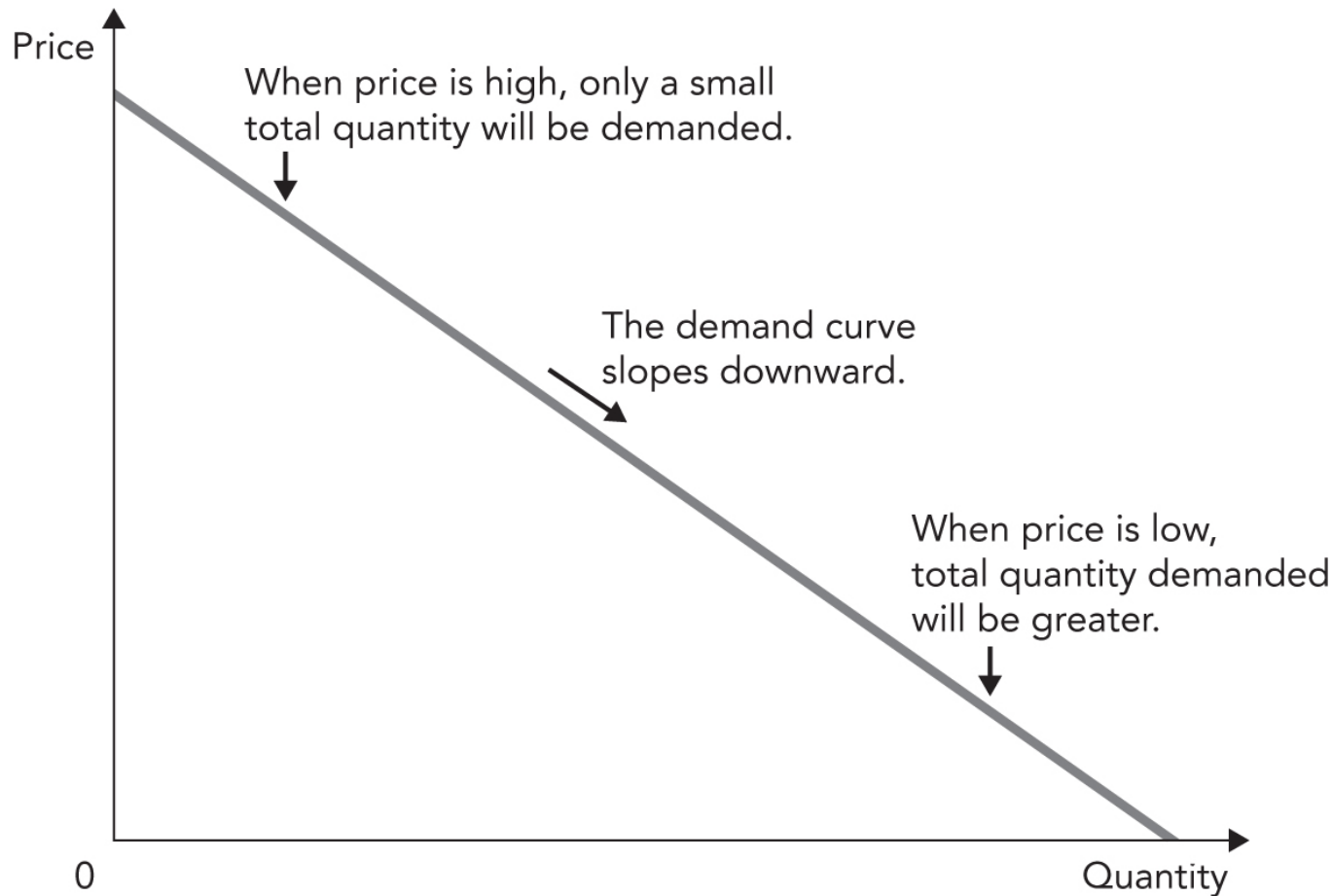




Recap: Price Demand Elasticity

Many markets follow this price-demand curve.

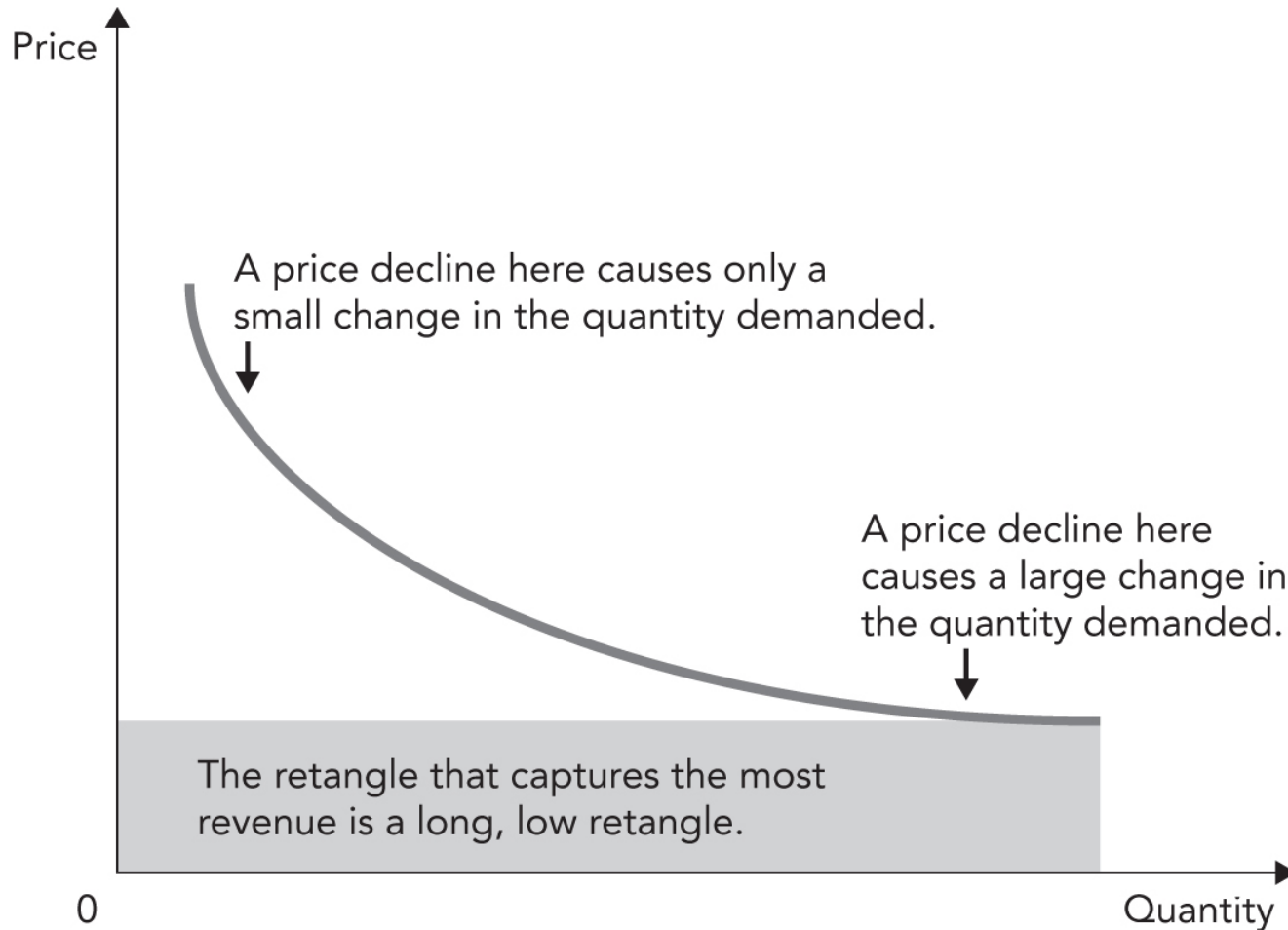
High Price -> Lower demand, Low price or free -> high demand.





When Platform Prices become Low Prices

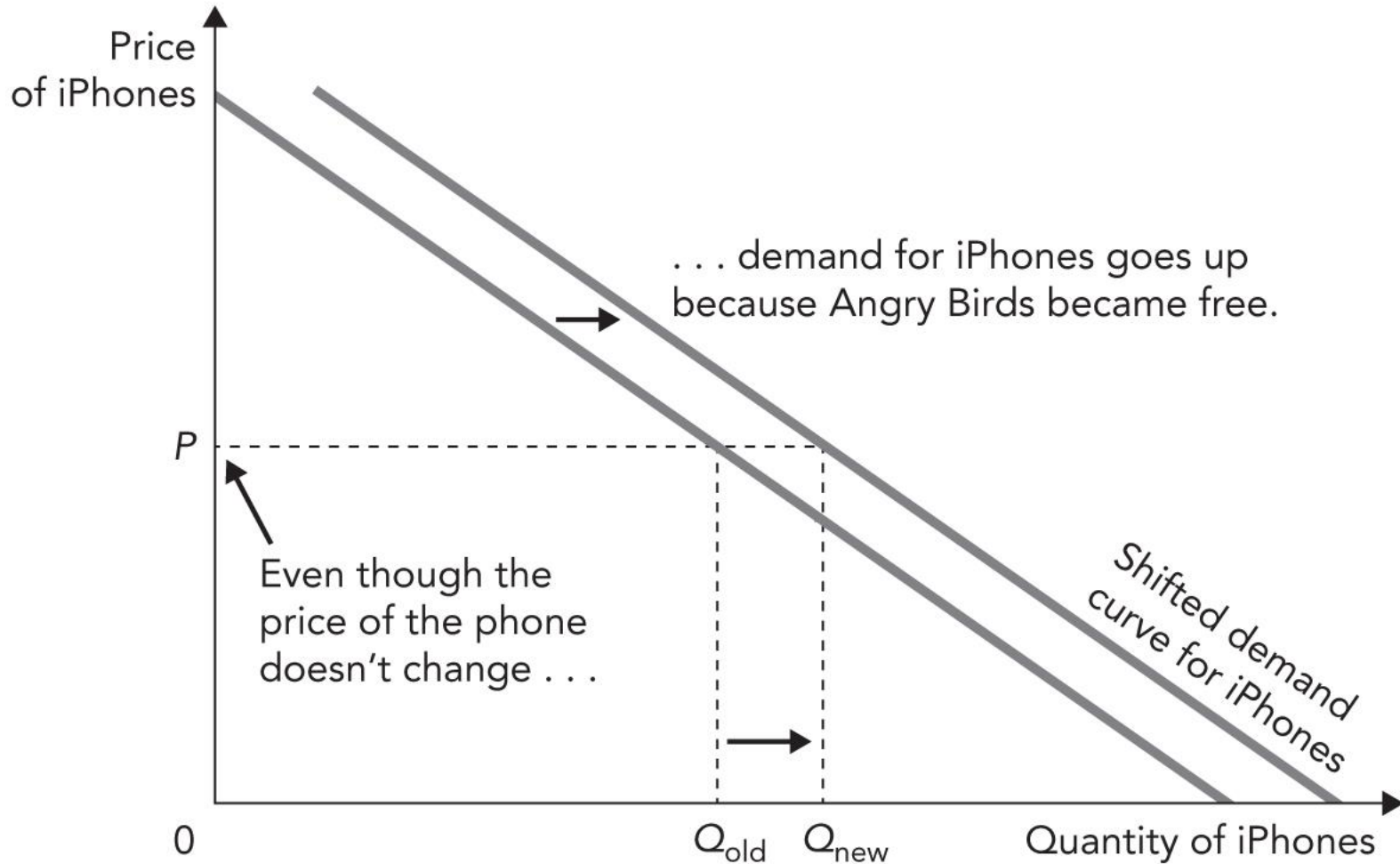
Price Demand Curve for Data Products: Big Elasticities; Long, Low Rectangles.





Trick: Complements with Data Products

Consider the iPhone Platform after a complement (an famous app) appeared. Because of this APP (and many other complementary apps), demand for iPhones goes up.



What are typical models of the (digital) economy?

- **Value Chain (Coca Cola etc.):** Transfer of a product (Tangible/Intangible) from supplier to customer
- **Value Network (Amazon marketplace, eBay, AirBnB):** Multi-sided Matching/Platform, Service Intermediary
- **Value Shop (Amazon AWS):** Problem Solving, Infrastructure, Platform, Software, Data, as-a-service

- The St. Gallen Business Model Navigator: Oliver Gassmann, Karolin Frankenberger, Michaela Csik. <https://www.thegeniusworks.com/wp-content/uploads/2017/06/St-Gallen-Business-Model-Innovation-Paper.pdf>
- OECD/G20 Base Erosion and Profit Shifting Project Tax Challenges Arising from Digitalisation –Interim Report 2018
https://www.oecd-ilibrary.org/taxation/tax-challenges-arising-from-digitalisation-interim-report_9789264293083-e
- Machine, Platform, Crowd: Harnessing Our Digital Future. Andrew McAfee, Erik Brynjolfsson , 2017
- World Economic Forum 2017. Unlocking Value from B2B Platforms.
<http://reports.weforum.org/digital-transformation/wp-content/blogs.dir/94/mp/files/pages/files/170321-dti-platform-economy-slideshare-final.pdf>
- Alexander Muschalle, Florian Stahl, Alexander Löser, Gottfried Vossen: Pricing Approaches for Data Markets. BIRTE 2012: 129-144



Summary

- Platform companies sample a snapshot of their ecosystem, such as customer profiles, product usages, suppliers, competitors, critical events or advertisers.
- Data products match between these profiles. Examples are predict(customer, product, supplier) or Maintain(machine, usage profile, sensors).
- Feedback-loops reinforce these profiles with additional data. Matching will be more precise and will convince more customers to use these data products
- Network effects (customers report about cool data products) create more data and reinforce even more data products and profiles.
- Technology (Big Data, AI) enables us leveraging these effects from networks effects. Additional data increases quality and lowers production costs for data products..
- Existing profiles permit complementary data products to conquer novel markets along the customer value chain. See Amazon -> Books -> Movies-> Shoes -> Food.
- Only <5% of platforms become the operating system for other platforms. These platforms utilize the trick of complements and permit hosting 3rd. party apps. Platform owners make their margin with every new 3rd. party app.



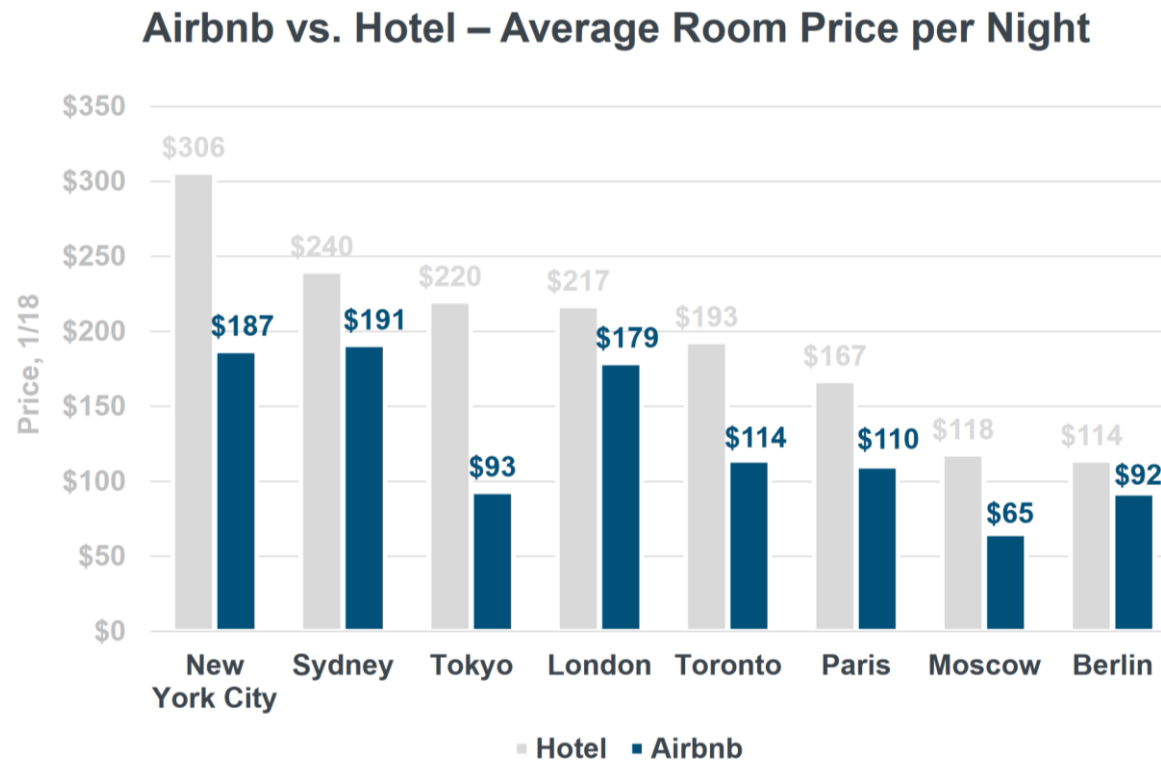
Platform Economy

EXAMPLES



Platform effects: AirBnB underprices Hotels

...Airbnb Consumer Benefits =
Can Offer Lower Prices for Overnight Accommodations



Platform effects: uber underprices personal cars

...Uber Consumer Benefits =
Lower Commute Cost vs. Personal Cars – 4 of 5 Largest USA Cities

UberX / POOL vs. Personal Car* – Weekly Commute Costs
5 Largest USA Cities, 2017



Partnerships: Ford+ Android+ Complements

The car with all its sensors becomes a platform for the platform economy. Ford could not evolve a sufficiently powerful platform and must partner now with Google, Spotify, etc.

- **Value Chain** (Music Streaming)
- **Value Network** (Advertising for shops along the route)
- **Value Shop** (collecting traffic data and user preferences, nudging in customers with Software-as-a-Service „Avoid traffic jams, find a parking lot“)

All 2017 Ford vehicles are getting CarPlay and Android Auto

Ford isn't limiting compatibility to but a few models.



Mariella Moon, @mariella_moon
07.25.16 in [Transportation](#)

22
Comments

1888
Shares



Ford has confirmed that *all* of its 2017 models -- every single car, SUV, light truck and EV -- are smartphone-ready. They all come loaded with Ford's Sync 3 entertainment system and are compatible with Apple CarPlay and

<https://www.engadget.com/2016/07/25/2017-ford-sync-3-android-auto-apple-carplay/>

Partnerships: uber+foursqaure+shops





Partnerships: uber+foursquare+shops

**In-Ride / In-Hand Recommendations (Uber + Foursquare) =
Location + Route + Destination + Time of Day (+ an Offer)**

Uber / Foursquare Partnership

In-App Recommendations for Nearby Businesses, 4/17



Hog Island Oyster Co.

1155 ratings · \$\$

Seafood · 1.1mi

"Right near the water! Get the oysters, mussels and fried anchovies. They are all super fresh and tasty"



Blue Bottle Coffee

428 ratings · \$\$\$

Coffee Shop · 1.4mi

"Latte and Snickerdoodle
- delicious quick snack.
Clean facility, good
coffee, good service and
friendly staff."

Source: uber 4/2017
(Kleiner Perkins
Internet Trends 2017)

Value Shop: Amazon Web Services (AWS)

https://aws.amazon.com/de/ec2/pricing/on-demand/

Amazon AWS

Vertrieb kontaktieren Produkte Lösungen Preise Erste Schritte Dokumentation Mehr Deutsch Mein Konto

PRODUKTE UND SERVICES

- Amazon EC2
- Product Details
- Getting Started
- Instances
- Developer Resources
- FAQs
- Pricing

VERWANDTE LINKS

- Amazon EC2-Spot-Instances
- Amazon EC2 Reserved Instances
- Amazon EC2 Dedicated Hosts
- Amazon EC2 – Dedicated Instances
- Amazon EC2 Elastic GPUs
- Windows Instances
- VMware Cloud auf AWS
- Systems Manager
- Server Migration Services
- Application Discovery

Linux RHEL SLES Windows Windows mit SQL Standard Windows mit SQL Web

Windows mit SQL Enterprise Linux mit SQL Standard Linux mit SQL Web Linux mit SQL Enterprise

Region: USA Ost (Nord-Virginia)

	vCPU	ECU	Arbeitsspeicher (RAM) (GiB)	Instance-Speicher (GB)	Linux/UNIX-Nutzung
Allgemeine Zwecke – Aktuelle Generation					
t2.nano	1	Variable	0.5	Nur EBS	\$0.0058 pro Stunde
t2.micro	1	Variable	1	Nur EBS	\$0.0116 pro Stunde
t2.small	1	Variable	2	Nur EBS	\$0.023 pro Stunde
t2.medium	2	Variable	4	Nur EBS	\$0.0464 pro Stunde
t2.large	2	Variable	8	Nur EBS	\$0.0928 pro Stunde
t2.xlarge	4	Variable	16	Nur EBS	\$0.1856 pro Stunde
t2.2xlarge	8	Variable	32	Nur EBS	\$0.3712 pro Stunde
m5.large	2	10	8	Nur EBS	\$0.096 pro Stunde
m5.xlarge	4	15	16	Nur EBS	\$0.192 pro Stunde
m5.2xlarge	8	31	32	Nur EBS	\$0.384 pro Stunde