

07.12.2016

# Unternehmensgründung/ Entrepreneurship:

## **Business-Model-Innovation > Med-Tech**

(Dipl. Ing. Bruno Müller)

**BM Capital Munich** [www.bm-c-m.com](http://www.bm-c-m.com)

## Bruno Müller



- Dipl. Ingenieur
- 20years Semiconductors/ Int'1 Business Development
- 10years Business-Model-Innovation/  
New Business Development/ Business Angel
- Lecturer/ Speaker

2016-12-07

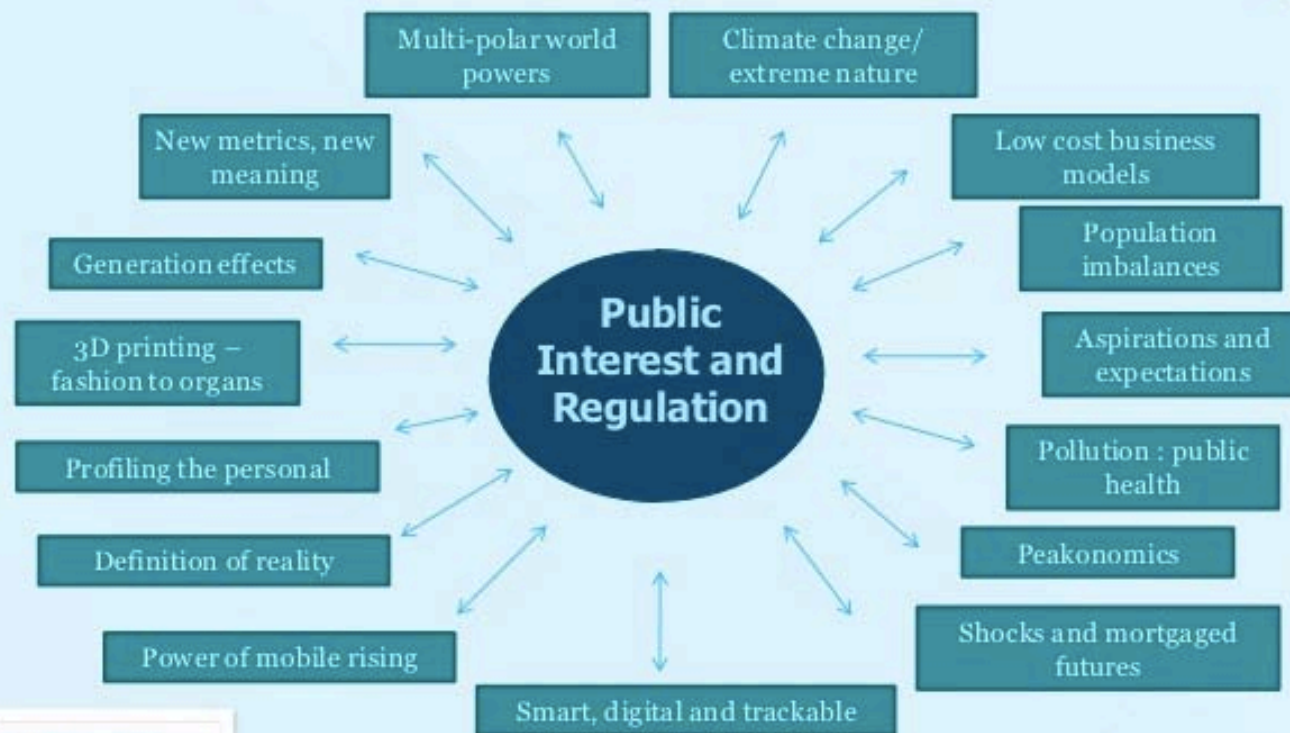
**Challenges**

---

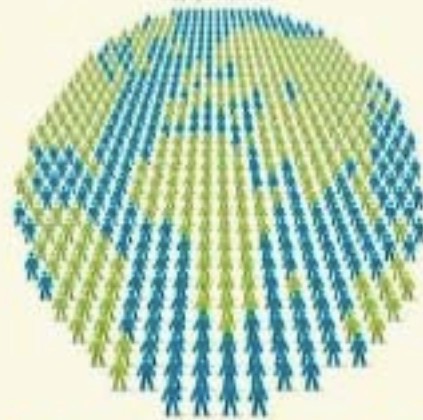
**Chances**

# What changes will shape 2030?

9



Copyrighted Material



THOMAS L. FRIEDMAN  
***THE WORLD  
IS FLAT***

A BRIEF HISTORY OF THE TWENTY-FIRST CENTURY

FURTHER UPDATED AND EXPANDED // RELEASE 2.0 // PICADOR

Copyrighted Material







Globalization





**STOP CLIMATE CHANGE...**



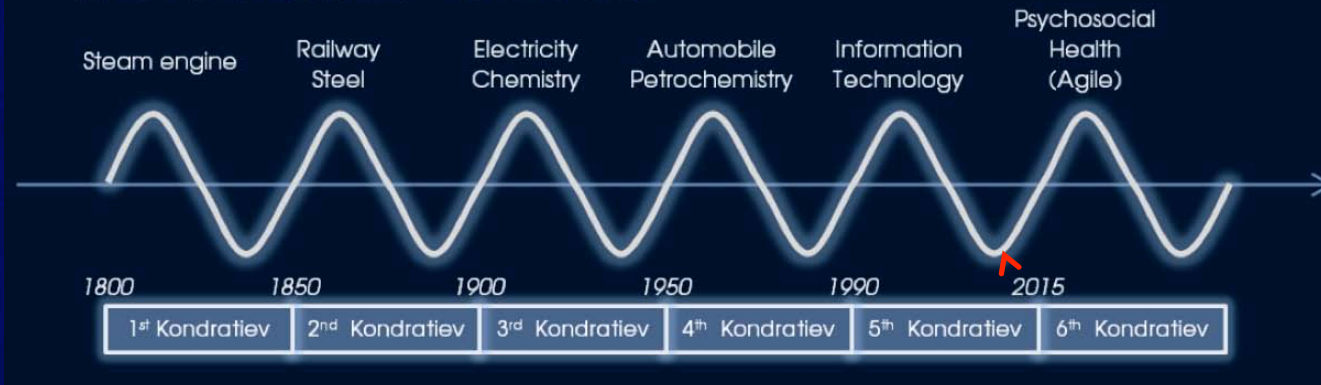
2016-12-07

**Challenges**

---

**Chances**

## Kondratiev waves



- Globalization
- Digitization

**DIGITAL**  
TRENDS

2017



## Connecting:

**Anything**

**Anyone**

**Anytime**

**Any place  
Any service  
Any network**

### HOME

- security
- energy efficiency
- pet feeding
- remote control of home appliances

### TRANSPORT

- supply chain
- remotely find park spots
- traffic optimisation
- airlines, trains

### INDUSTRY

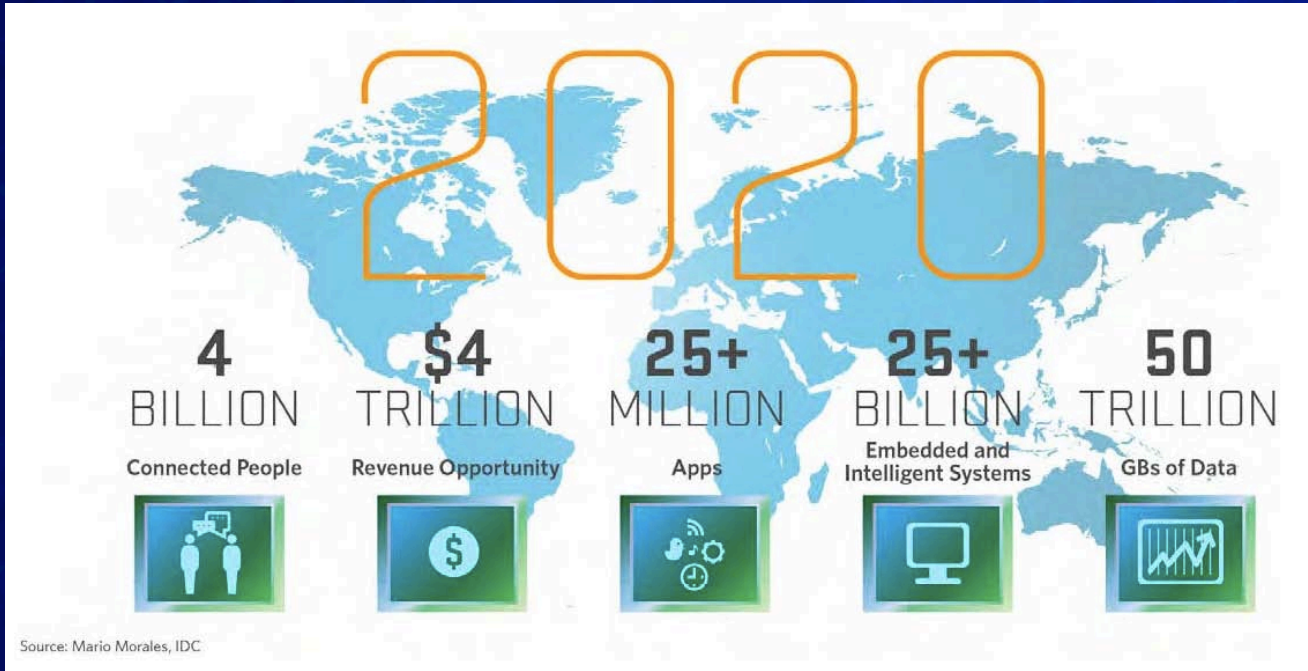
- preventive maintenance: machines communicating before the breakdown
- machines communicate each other and increase productivity

### HEALTHCARE

- health monitoring
- independent elder people
- remote diagnostics
- food sensors

### SMART CITIES

- waste management
- emergency services
- energy efficiency
- surveillance



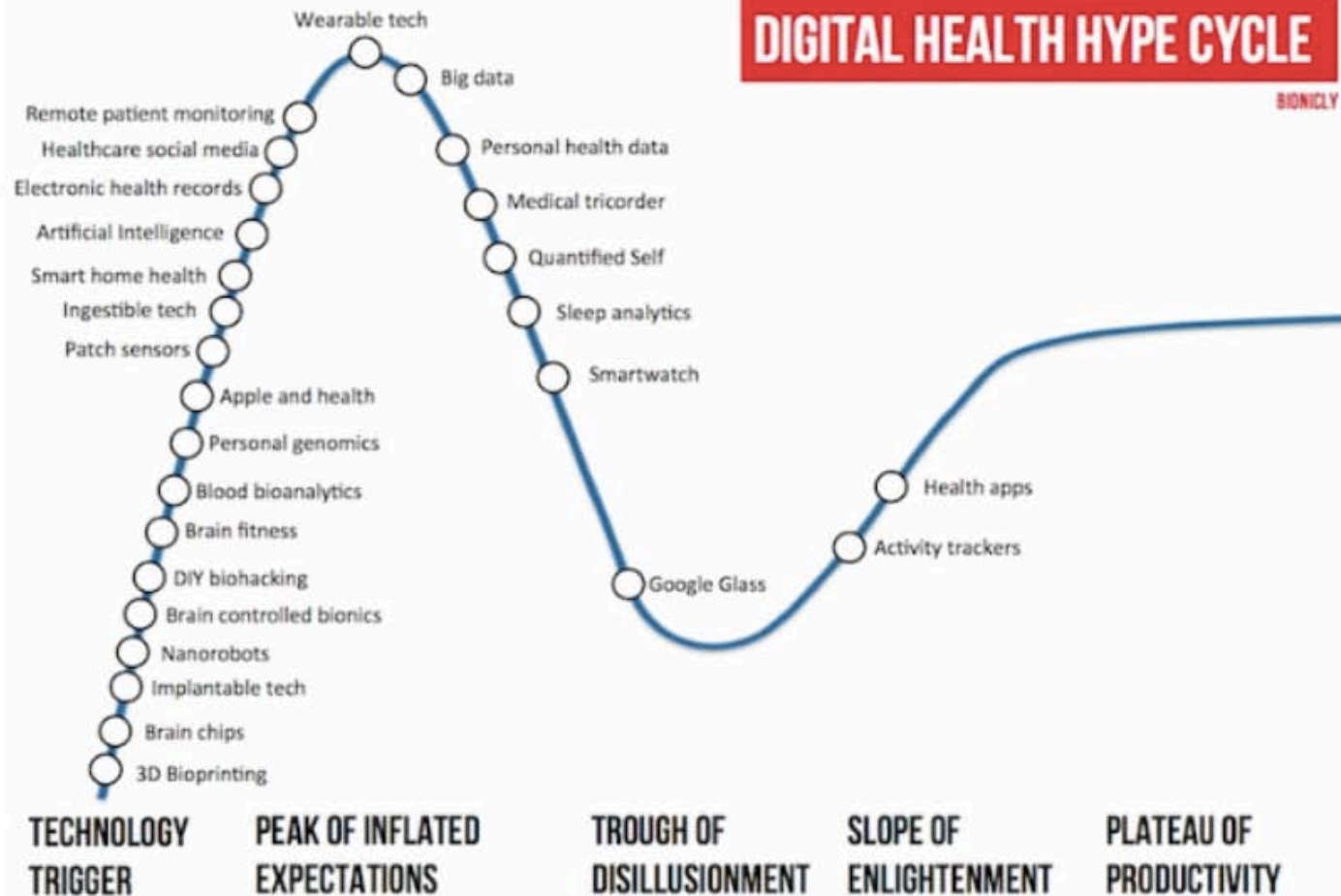


# Digital Health



# DIGITAL HEALTH HYPE CYCLE

BIONICLY



This Digital Health Hype Cycle has in no way been endorsed by Gartner, Inc.

Source: <http://bionically.com/digital-health-hype-cycle/>

# Shifting the point of care to the periphery



# Shifting the Point-of-Care

Medical diagnostics and monitoring at the time and place of patient care, outside the clinical laboratory.

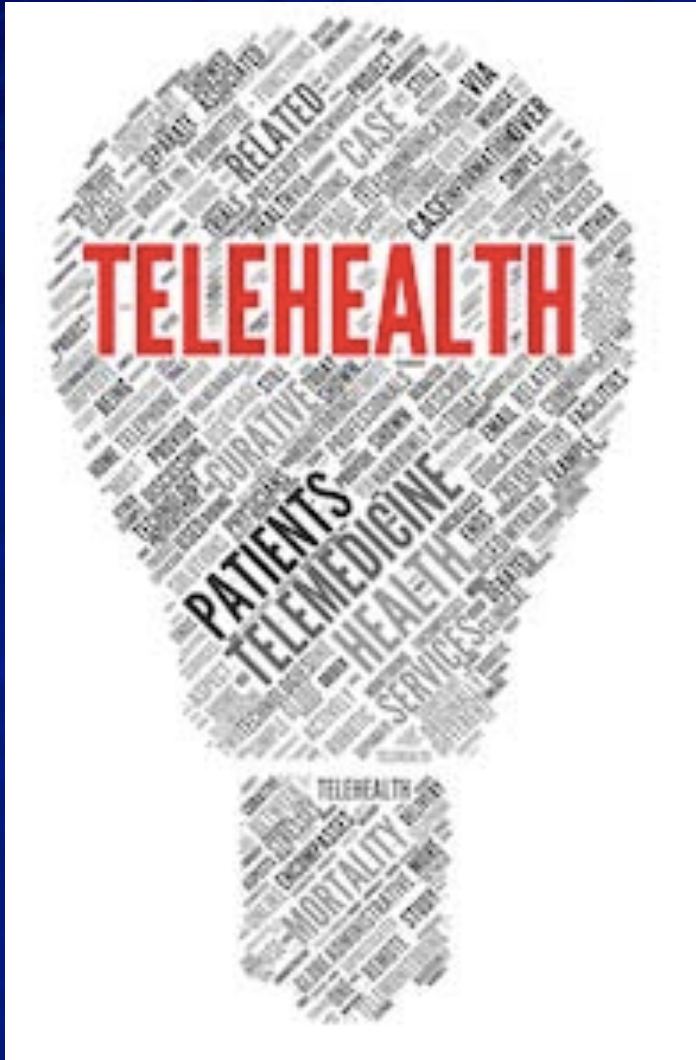
## New focus

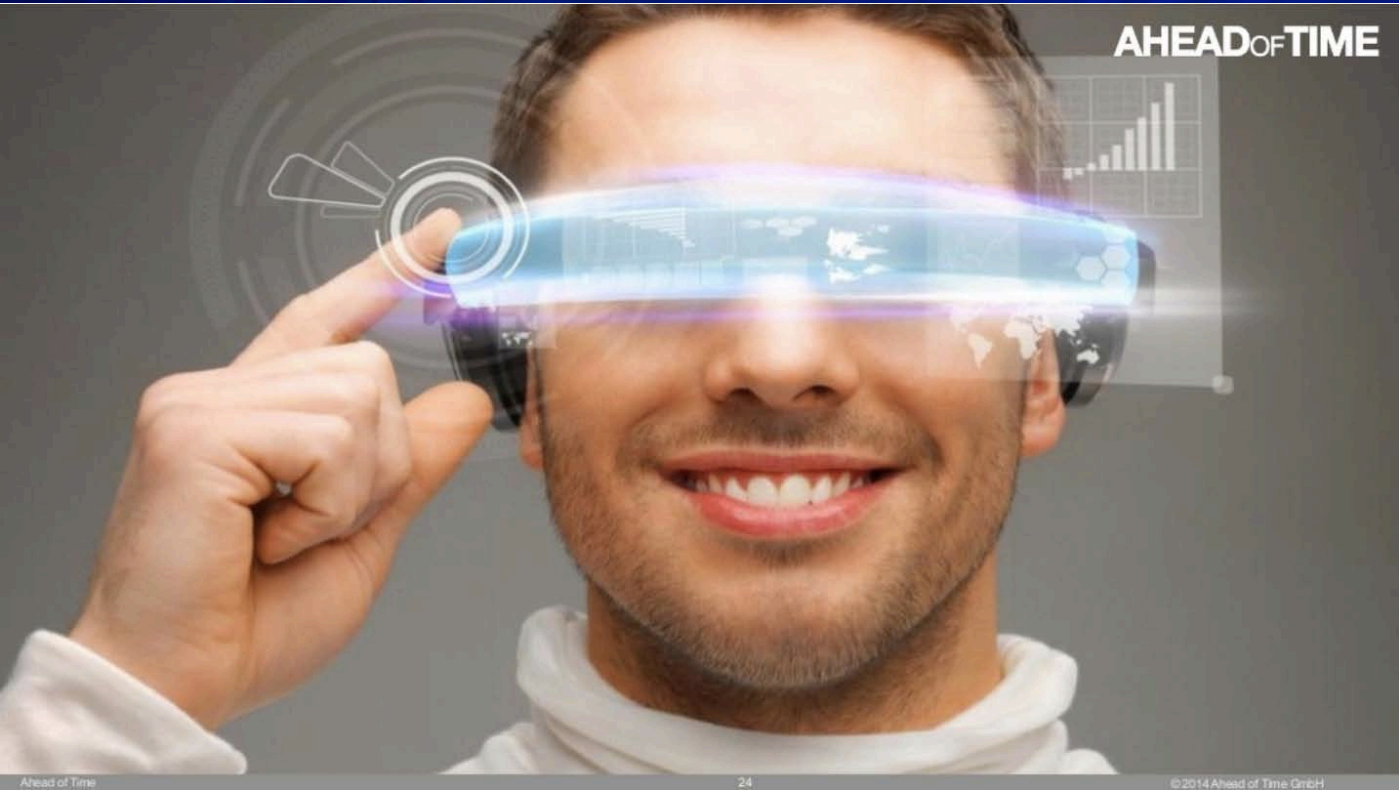
- + Doctor and patient both get faster test results
- + More convenient for patient and provider
- + Proven increased patient satisfaction
- + Decrease in overall cost of care

A word cloud centered on the phrase "BIG DATA". The words are arranged in a roughly rectangular shape, with "BIG DATA" being the largest and most prominent. Other large words include "INTERNET", "BUSINESS", "SOCIAL", "BRAND", and "TARGET". Smaller words include "ADVERTISING", "PROMOTION", "E-MARKETING", "COMMUNICATION", "COMPUTER", "BRANDING", "CONSUMER DEMAND", "MARKETS", "CONSUMER", "ORGANIZATION", "PLANNING", "WEB MARKETING", "STATISTICS", "SOFTWARE", "MULTIMEDIA", "NETWORK", "WWW", "SERVICES", "PROJECTS", "CONTENT", "EVENTS", "PROGRAMMING", "APPS", "SOCIAL NETWORKS", "SOLUTIONS", "RESEARCH", "COM", "VISION", "ENGINEERING", "WEB DEV", "STRATEGY", "WORLDWIDE", "ORGANIZATION", "PRICING", "SEGMENTATION", "SOCIAL NETWORKS", "MOBILE", "SERVICE", "PRO", "CODING", "DIGITAL", "INFORMATION", "MEDIA", "BEHAVIOUR", "BUZZ", "BIG DATA", "DATA", "PROJECTIONS", "B2B", "TARGET", "PLANNING", "BRANDS", "SOLUTIONS", "MULTIMEDIA", "NETWORK", "WWW", "SERVICES", "PROJECTS", "CONTENT", "EVENTS", "PROGRAMMING", "APPS", "SOCIAL NETWORKS", "SOLUTIONS", "RESEARCH", "COM", "VISION", "ENGINEERING", "WEB DEV", "STRATEGY", "WORLDWIDE", "ORGANIZATION", "PRICING", "SEGMENTATION", "SOCIAL NETWORKS", "MOBILE", "SERVICE", "PRO", "CODING", "DIGITAL", "INFORMATION", "MEDIA", "BEHAVIOUR", "BUZZ", "BIG DATA", "DATA", "PROJECTIONS", "B2B", "TARGET", "PLANNING", "BRANDS", "SOLUTIONS".

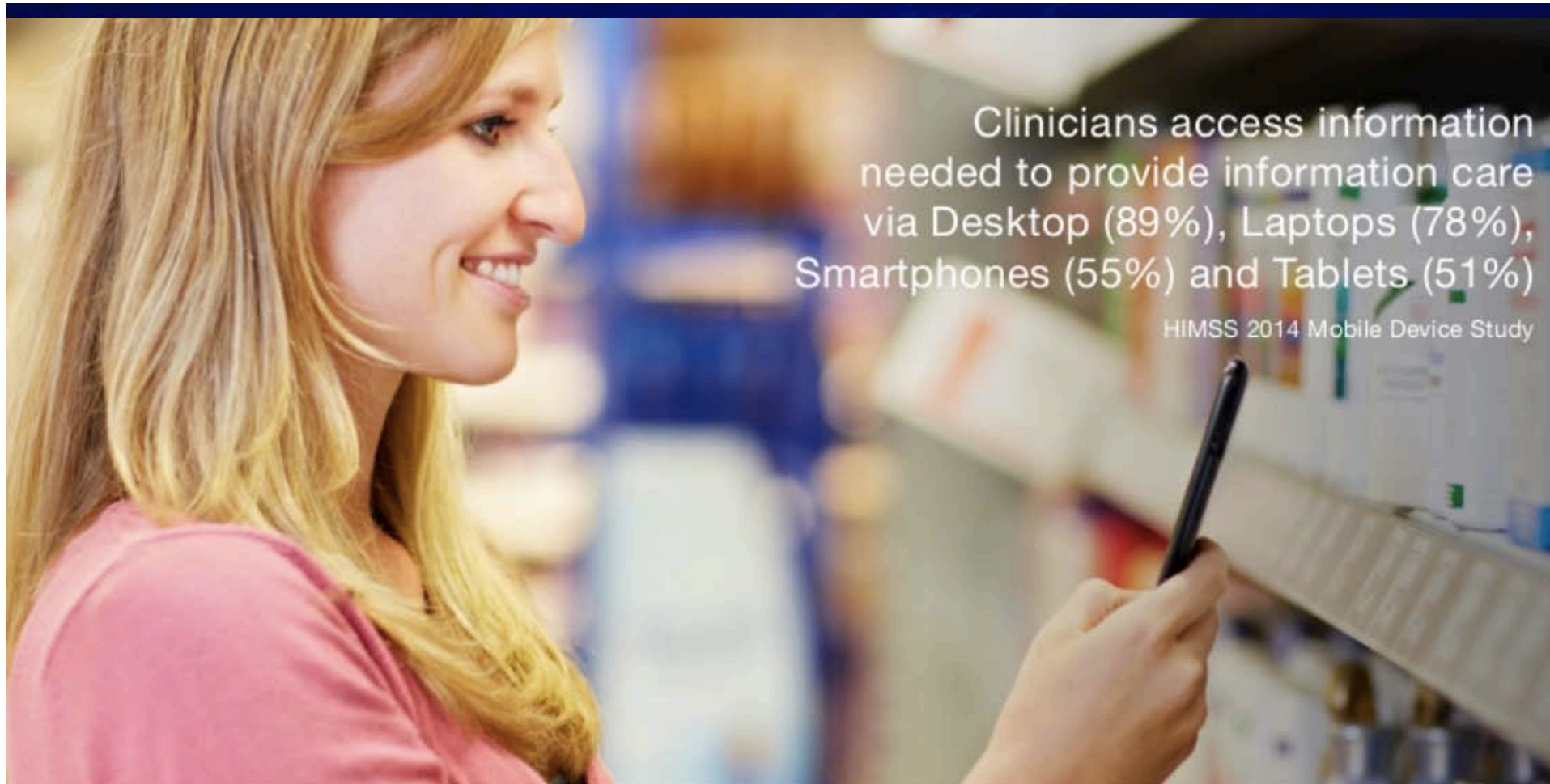
The logo for IBM Watson Health is centered on a dark blue background. It features the letters 'IBM' in a light green color, followed by the words 'Watson Health' in white. The text is overlaid on a horizontal rectangular area that has a lighter blue, textured background with some circular patterns, possibly representing a microscopic view of cells or a medical scan.

**IBM Watson Health**









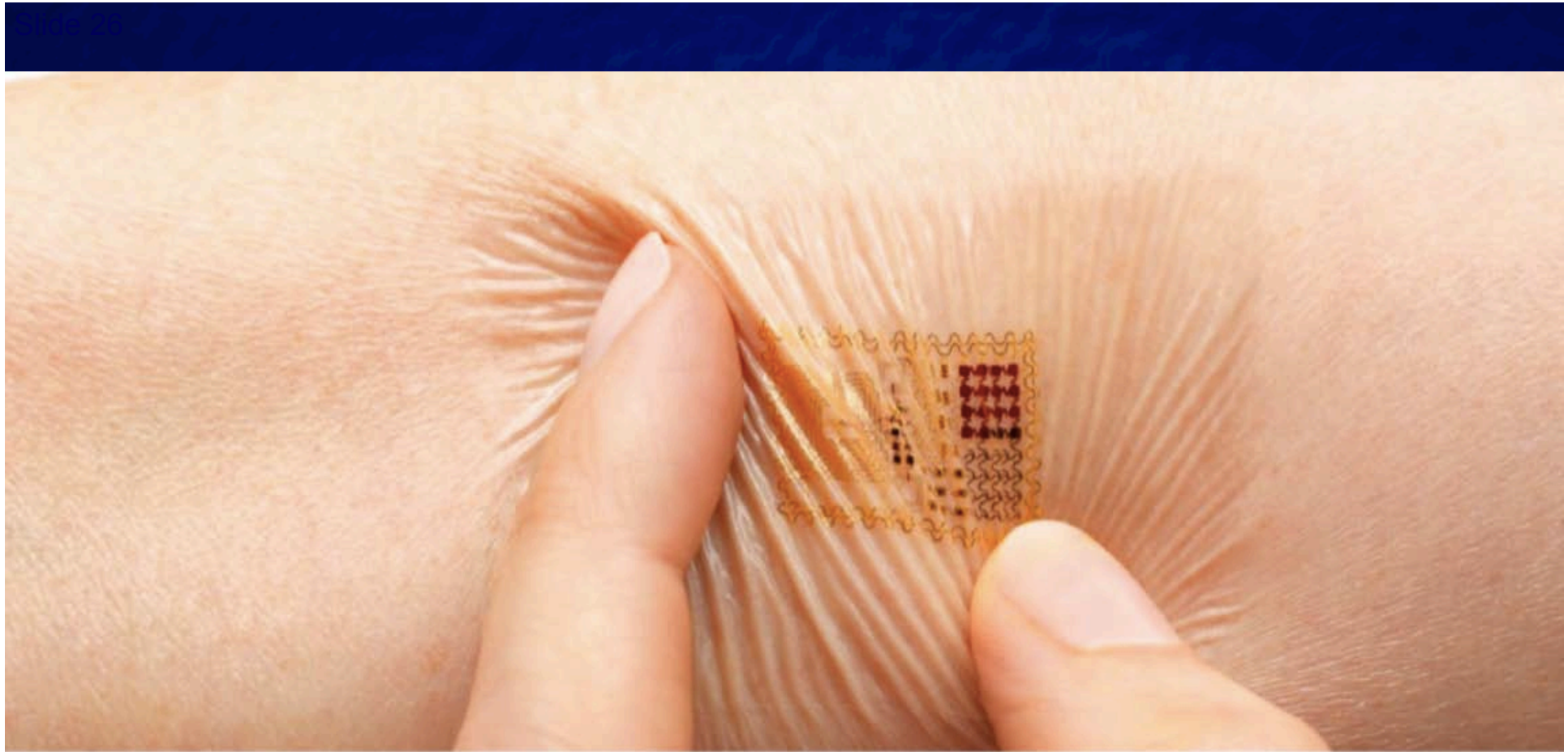
Clinicians access information needed to provide information care via Desktop (89%), Laptops (78%), Smartphones (55%) and Tablets (51%)

HIMSS 2014 Mobile Device Study

## 2. Mobilization of Processes and Documents

In the above mentioned study, 69% of respondents also noted that they used apps to access clinical information. However, only 33% reportedly believe they can access most or all of the clinical systems technologies they need via smartphones/tablet computers. Hospitals, care homes and health institutions are leveraging mobile to change and improve the way they work ranging from schedule

management, time reporting and communication between care takers to submission of forms, safety, ordering of medicine, accessing patient records and logging of patient data. This is by no means a fast process due to HIPPA compliance and other regulatory requirements but it's happening. One example is LifeLink which provides a personal cloud based solution to patient records.



### 3. Wearables and Sensors

When wearables are discussed most people refer to smart watches, fitness trackers and Google Glass. This is not where the big innovation is and in fact doctors tell us that they are not even interested in the data provided by fitness trackers and smart watches. Not everyone wants to admit that or the current issue with wearables that half of the people that buy them stop using the

device within 3 months. Instead it will be specialised wearables and sensors that are the big break-through. Here are a few examples: [Electrozyme](#) is developing a printed, flexible strip sensor that measures electrolyte balance, hydration, muscle exertion and physical performance [SniffPhone](#) is a device connected to your phone that will be able

“86% of clinicians believe that apps will become important for health management over the next 5 years”

PWC Top Health Industry Trends 2015



## 4. DIY and Prescription-Only Apps

Twenty percent of respondents to an HRI consumer survey said FDA approval was very important in their decisions to use a mobile app. WellDoc's BlueStar is a "Mobile Prescription Therapy" that allows people to input data about their glucose levels, diet, exercise and more. Another app that has **recently been approved by the FDA** allows radiologists to view images on their smartphone. It is important to

determine whether your product is a medical device or app. If your product is a medical device you need to go through the 510 clearances.

We expect to see more of these as health care apps truly have an impact on our health. **HealthTap ranked the top apps in 2014** which were mostly food and exercise related.



## 8. Venture Capital Investors Pouring Money into Healthcare

According to TechCrunch, the venture capitalists invested 250% more money into health insurance in 2014 than they did the year prior. In April 2015 Oscar was one of the first mHealth startups to reach unicorn (\$1 Bn dollar valuation).

Other possible mHealth candidates for IPOs in 2015 are Practice Fusion, Doximity, Healthgrades, Evolent Health, Best Doctors, ZocDoc, and AirStrip




## 9. The Race to Take Care of the Elderly

Baby boomers are getting older and there are not enough geriatric physicians or even primary care physicians to care appropriately for this ageing group.

Almost all wearables and new technology for the elderly are GPS or location based, with the purpose of finding lost nursing home

residents or informing family members that an accident has occurred. GeriJoy is one of the few technologies that is focused on improving the quality of life for the elderly.



A blurred photograph of a doctor and a patient looking at a device together. The doctor is on the right, wearing a light blue shirt, and the patient is on the left. They are both looking down at a device, likely a tablet or smartphone, which is the focus of their attention. The background is out of focus, suggesting a clinical or office setting.

“By 2017 the total  
mHealth market will  
reach \$26B in revenue”

Research and Markets





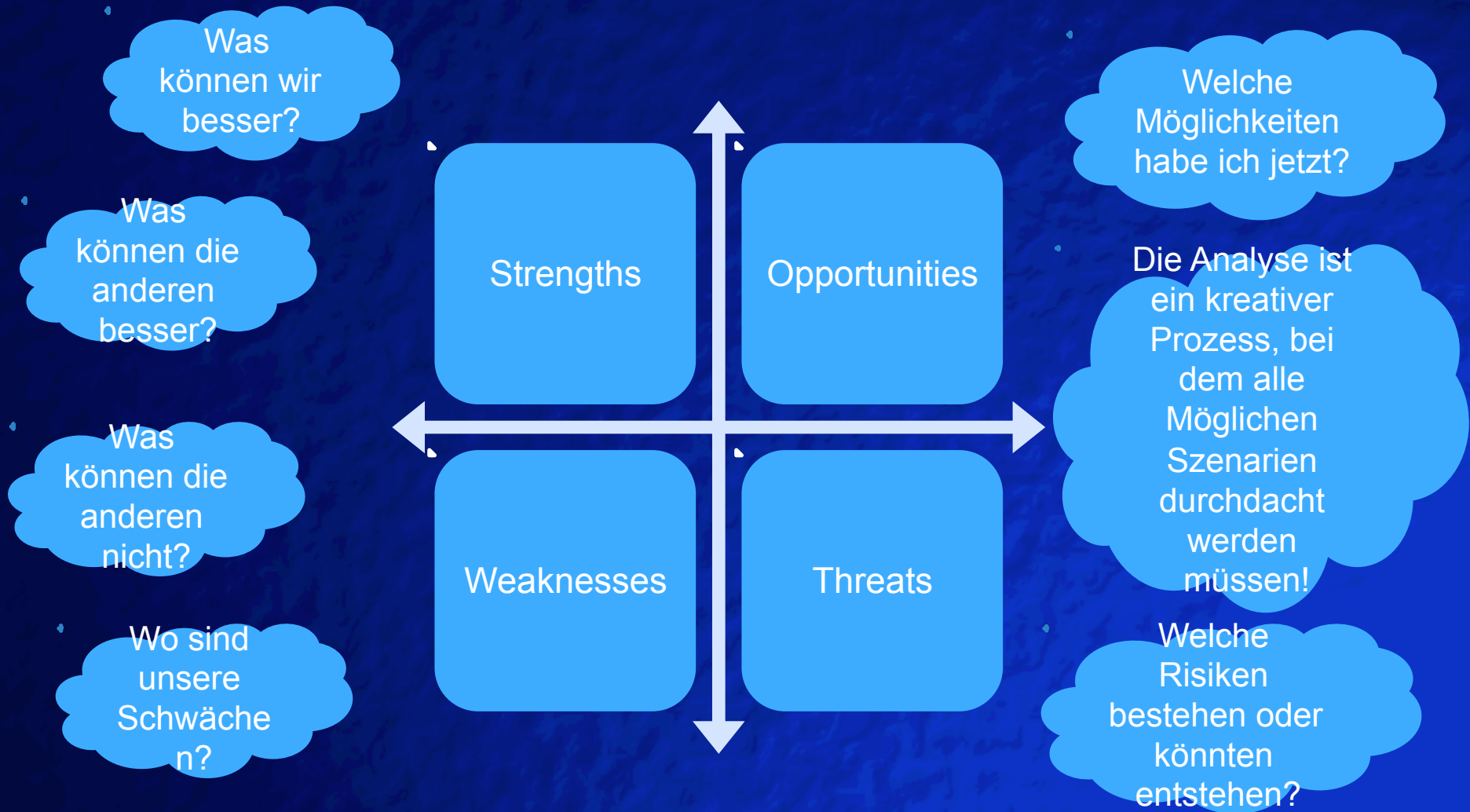




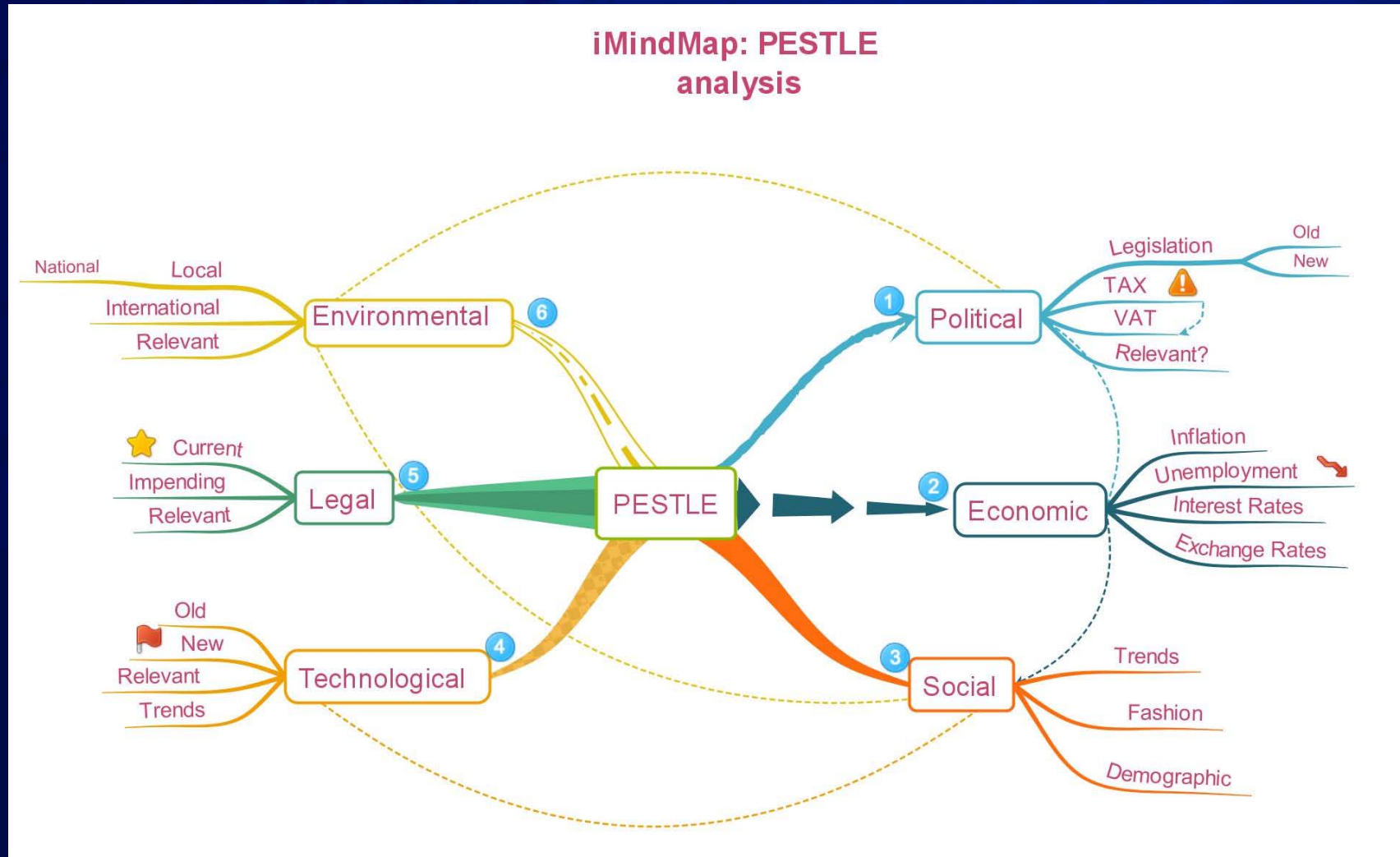
# MARKET-ANALYSIS

- **SWOT Analyse** (intern/ extern)
  - Interne und externe Wechselwirkung mit dem Markt
  - Strength, Weakness, Opportunities & Threats
- **PESTLE Analyse** (Makroökonomie Betrachtung)
  - Analyse Dimensionen: Politics, Economics, Society, Technology, Legal, Environmental
- **Porter's Five Forces** (optimale Region für meine Firma)
  - Kunden oder Abnehmer
  - Lieferanten
  - Substitutionsprodukte
  - Rivalität zu bestehenden Firmen
  - Potentielle neue Wettbewerber

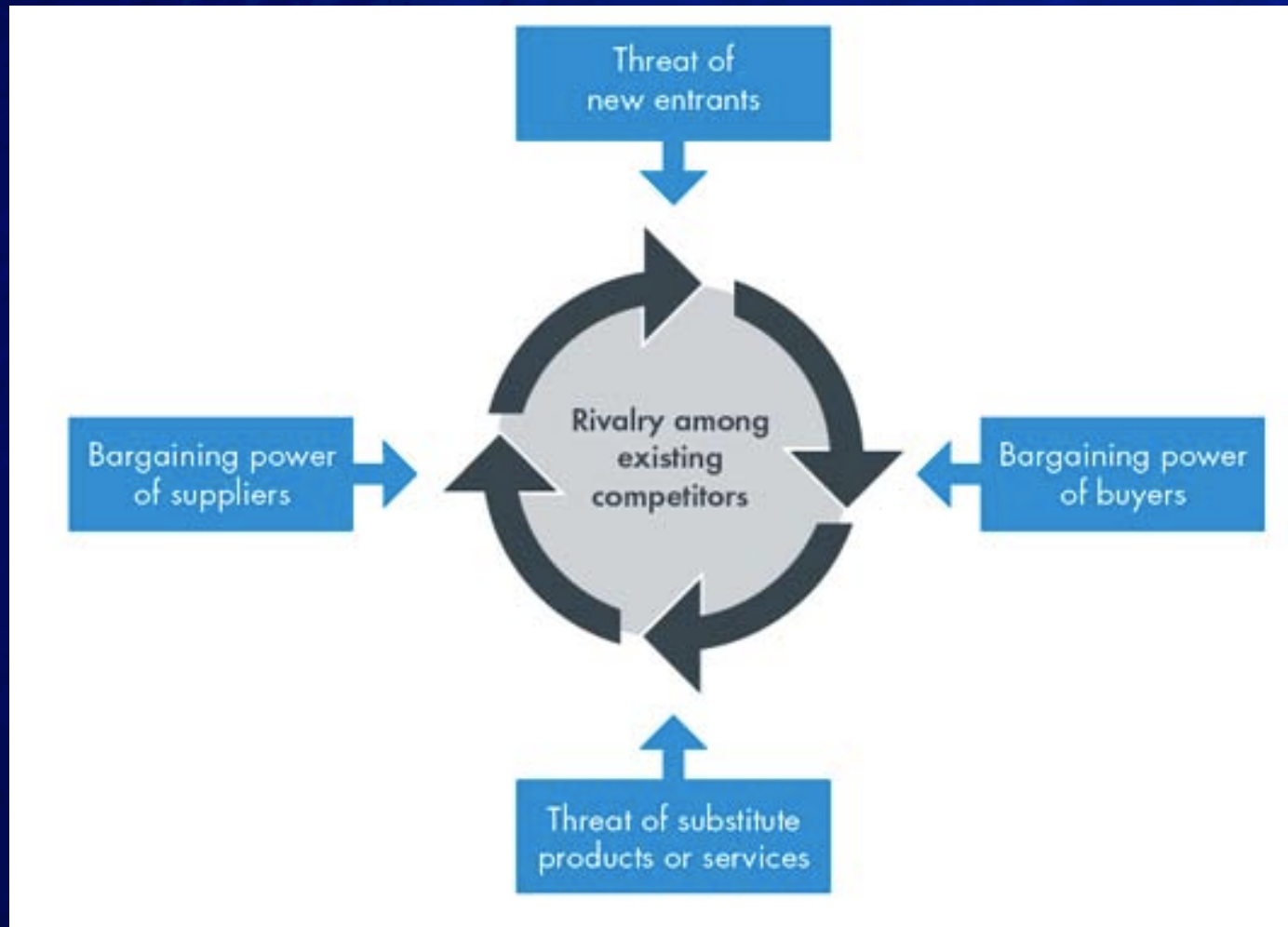
# SWOT Analyse zur internen und externen Evaluation



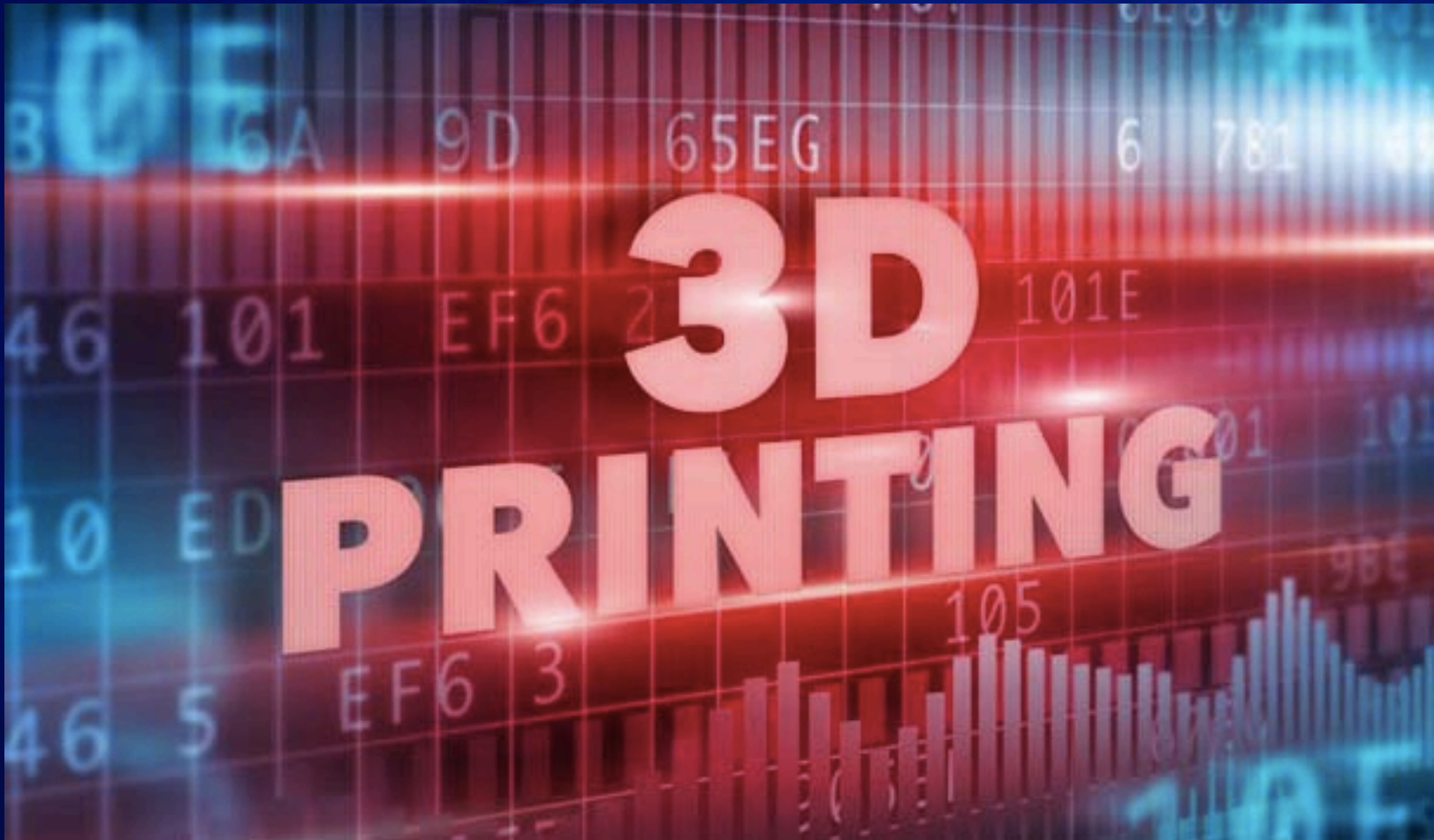
# PESTLE Analyse aus makroökonomischer Perspektive



# Porter's Five Forces









## 3D-Printing - Additive Manufacturing for Medical Devices

Industrial 3D printing technology allows to produce specialised surgical instruments and medical devices quickly and cost-effectively.

Every person is unique.

- Optimal patient care in dentistry, orthopaedics and implantology requires medical products that provide a perfect fit.
- High demand for one-off components.
- Specialised surgical instruments and medical devices.
- Products must be made available quickly and cost-effectively.

3D-Printing

Additive Manufacturing is meeting these requirements

*Sie*

*haben die Macht die Welt zu verändern*

*Sie*

*haben die Macht die Welt zu verändern*

*Ihre IDEE*

think  
big



think  
big

Wie?

think  
big

Wer?

Kosten / Erträge

Wie?

Was?

Wer?

Kosten / Erträge

## 8. Key Partners

Wer sind unsere Key Partners?

Wer sind unsere key suppliers?

Welche Schlüssel-Ressourcen kaufen wir von einem Partner ein?

Welche Key Activities werden von Partnern ausgeführt?

## 7. Key Activities

Welche Key Activities erfordert unsere Value Proposition?

...unsere Distribution Channels?

...unsere Customer Relationships?

...unsere Revenue Streams?

## 6. Key Resources

Welche Key Resources benötigt unsere Value Proposition?

...unsere Distribution Channels?

...unsere Customer Relationships?

...unsere Revenue Streams?

## 2. Value Propositions

Welchen Wert oder Nutzen versprechen wir den Kunden?

Welches unserer Kundenprobleme helfen wir lösen?

Welche Kombinationen von Produkten und Diensten bieten wir unseren verschiedenen Customer Segments?

Welche Kundenbedürfnisse befriedigen wir?

## 4. Customer Relationships

Welche Art von Beziehung erwarten unsere Kunden?

Welche haben wir bereits hergestellt?

Wie sind die Kundenbeziehungen in unser Geschäftsmodell eingebettet?

Wie teuer sind sie?

## 3. Channels

Durch welche Kanäle wollen Kunden von uns angesprochen werden?

Wie erreichen wir unsere Kunden jetzt?

Wie sind unsere Kanäle integriert?

Welche funktionieren am besten?

## 1. Customer Segments

Für wen erschaffen wir Werte?

Wer sind unsere wichtigsten Kunden?

## 9. Cost Structure

Was sind die wichtigsten Kosten in unserem Geschäftsmodell?

Welche Key Resources sind am teuersten?

Welche Key Activities sind am teuersten?

## 5. Revenue Streams

Wofür sind unsere Kunden wirklich bereit zu zahlen?

Wofür bezahlen sie momentan?

Wie zahlen sie momentan?

Wie würden sie lieber bezahlen?

Welchen Anteil hat welcher Revenue Stream?

### KEY PARTNERS

Who are our key partners?  
Who are our key suppliers?  
Which key resources are we acquiring from our partners?  
Which key activities do partners perform?

### KEY ACTIVITIES

What key activities do our value propositions require?  
Our distribution channels?  
Customer relationships?  
Revenue streams?

### KEY RESOURCES

What key resources do our value propositions require?  
Our distribution channels?  
Customer relationships?  
Revenue streams?

### VALUE PROPOSITIONS

What value do we deliver to the customer?  
Which one of our customers' problems are we helping to solve?  
What bundles of products and services are we offering to each segment?  
Which customer needs are we satisfying?  
What is the minimum viable product?

### CUSTOMER RELATIONSHIPS

How do we get, keep, and grow customers?  
Which customer relationships have we established?  
How are they integrated with the rest of our business model?  
How costly are they?

### CHANNELS

Through which channels do our customer segments want to be reached?  
How do other companies reach them now?  
Which ones work best?  
Which ones are most cost-efficient?  
How are we integrating them with customer routines?

### CUSTOMER SEGMENTS

For whom are we creating value?  
Who are our most important customers?  
What are the customer archetypes?

### COST STRUCTURE

What are the most important costs inherent to our business model?  
Which key resources are most expensive?  
Which key activities are most expensive?

### REVENUE STREAMS

For what value are our customers really willing to pay?  
For what do they currently pay?  
What is the revenue model?  
What are the pricing tactics?



## BM CAPITAL MUNICH

*Bruno Müller*

Dipl. Ing.

Balanstrasse 63,  
81541 Munich/ Germany

[bm@bm-c-m.com](mailto:bm@bm-c-m.com)

+49 (0) 89 4900 9977

[www.bm-m-c.com](http://www.bm-m-c.com)