



**The Reality about
Virtual and Augmented Reality**

An Immersive Customer Perspective

Hannover, June 12th 2018

Our agenda today



Preface and relevant research



Virtual Reality hardware status quo



Virtual Reality purchase intent and market perspectives



Virtual Reality content



Augmented Reality pre-taste

Preface and relevant research

Deloitte VR/AR-research

In the days of the biggest market hype, Deloitte has analyzed the prospects for virtual and augmented reality in Germany

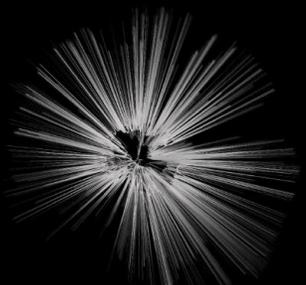


Methodology

Today, our consumer surveys allow for a recent market reality check



Deloitte.



Global Mobile Consumer Survey 2017 – Mobile Evolution
Ausgewählte Ergebnisse für den deutschen Mobilfunkmarkt
10. Oktober 2017

- 2,000 respondents in Germany
- Representative results
- Online survey
- Survey period: Q3 2017
- International comparisons with 33 participating countries, >53,000 global respondents

Deloitte.



Media Consumer Survey 2018
Eine Bestandsaufnahme traditioneller und digitaler Medienangebote
Juni 2018

- 2,000 respondents in Germany
- Representative results
- Online survey
- Survey period: May 2018
- Study to be released in summer

Exclusive
preview of
study results

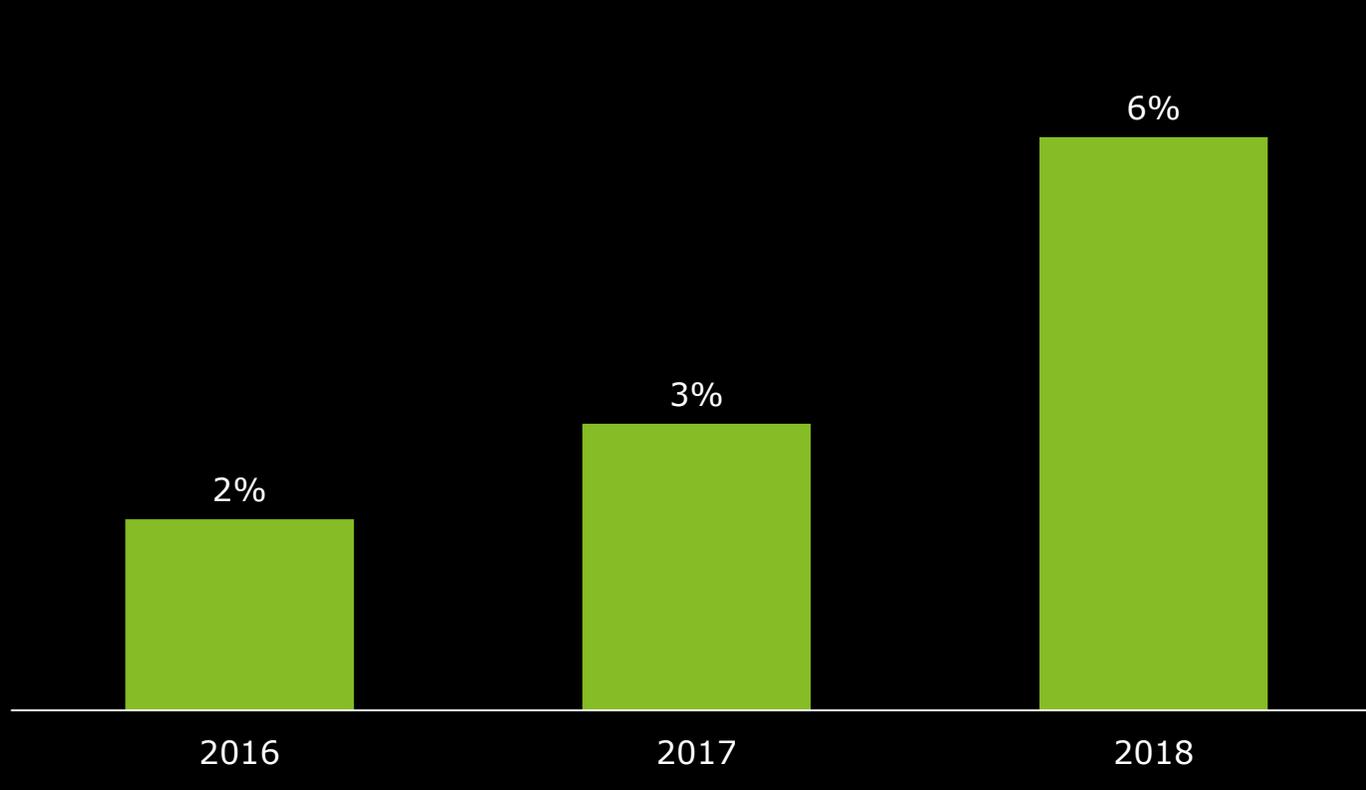
The actual spread of
VR-hardware still does
not reflect the hype

VR-penetration

After disillusionment in 2017, penetration of VR hardware has slightly increased in the last months



Germany: VR-hardware penetration*



- In the past twelve months, spread of VR hardware has doubled in Germany
- However, Virtual Reality is still far away from being a mass phenomenon
- Highest spread in segment relating to age group 24-35 years (17%)

*) Relevant VR-hardware segments: low end, mobile and full feature.

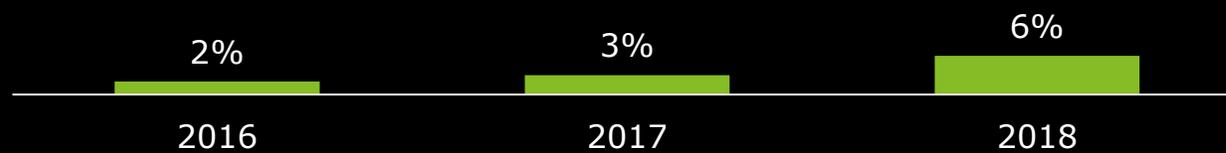
Source: Deloitte Global Mobile Consumer Survey 2017, Deloitte Media Consumer Survey 2018, Bitkom Research

VR-penetration

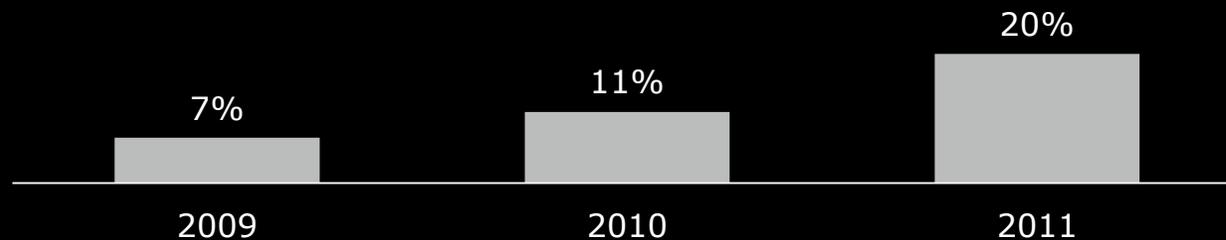
Albeit on a lower level, VR is following the same hype cycle as smartphones just a few years ago



Germany: VR-hardware penetration*



Germany: smartphone penetration 2009-2011



- The VR market shows typical stages of tech development
- After quickly convincing early adopters, the market flattened before improving long-term
- In the same market phase, smartphone penetration showed substantial growth

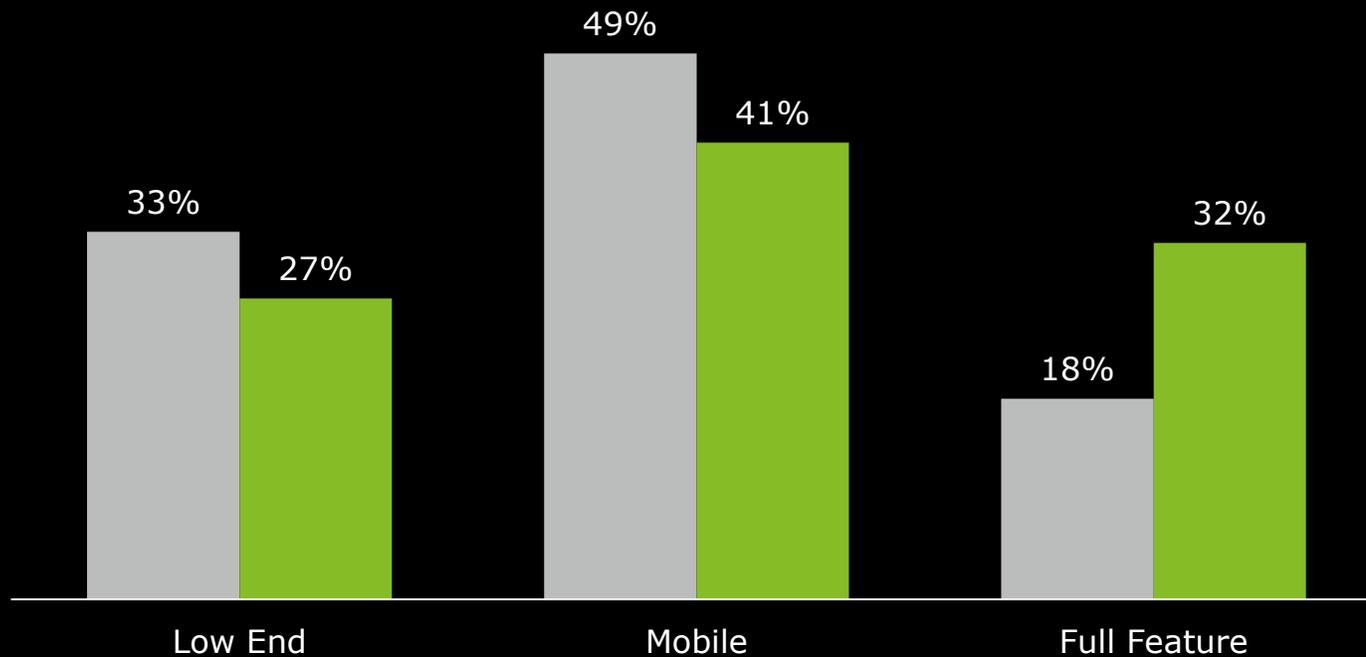
*) Relevant VR-hardware segments: low end, mobile and full feature.
Source: Deloitte Global Mobile Consumer Survey 2017, Deloitte Media Consumer Survey 2018, Bitkom Research

Hardware types

Other than in the early days of VR, consumers today are using higher quality hardware



Germany: VR headset-types in use



- PlayStation VR drives success of the full-feature-segment
- Cardboards are not designed for long-time use
- Often insufficient resolution of smartphone screens limit the success of mobile VR hardware

Source: Deloitte Global Mobile Consumer Survey 2017

■ 2016 ■ 2017

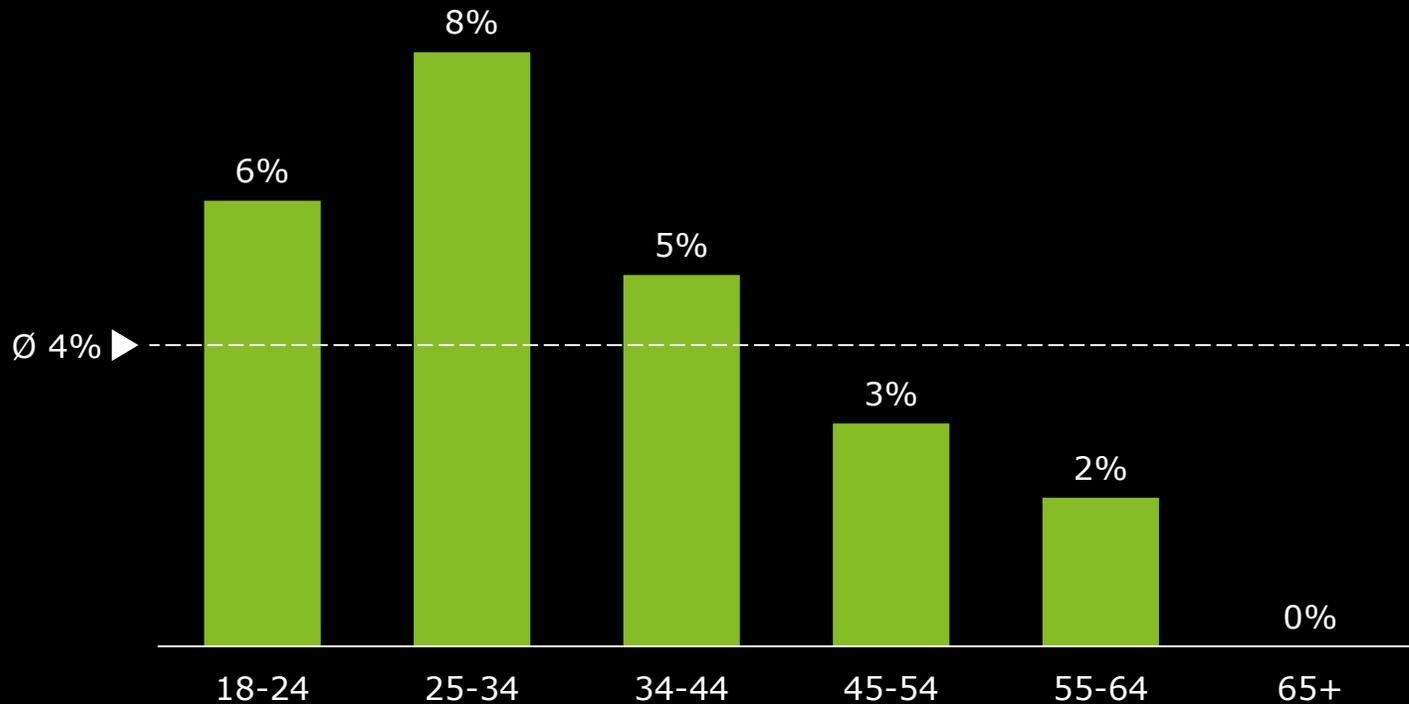
Purchase intent for VR is limited. There is no evidence for rapid market growth

Purchase intent

The revealed consumer interest indicates a rather moderate further VR growth



Germany: VR-hardware purchase intent (by age segments)



- No apparent evidence for rapid VR market growth
- Highest interest exists among young and middle-aged consumers
- Exorbitant expectations into VR are inappropriate

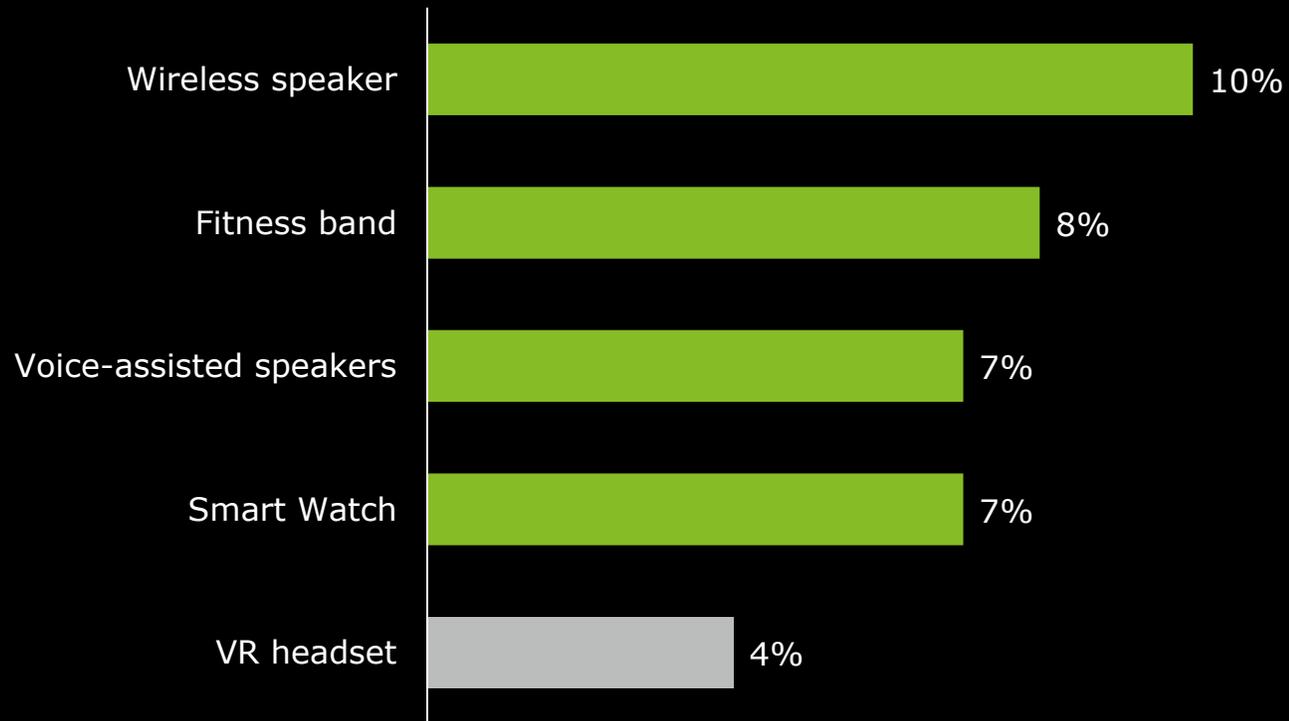
Source: Deloitte Global Mobile Consumer Survey 2017

Purchase intent

Purchase intent for VR headsets is even lagging behind other innovative gadgets



Germany: Purchase intent for innovative gadgets



- Virtual Reality competes with other new consumer technologies
- VR headsets are obviously not the “hottest” gadgets on the market
- Purchase intent for smart watches is almost twice as high

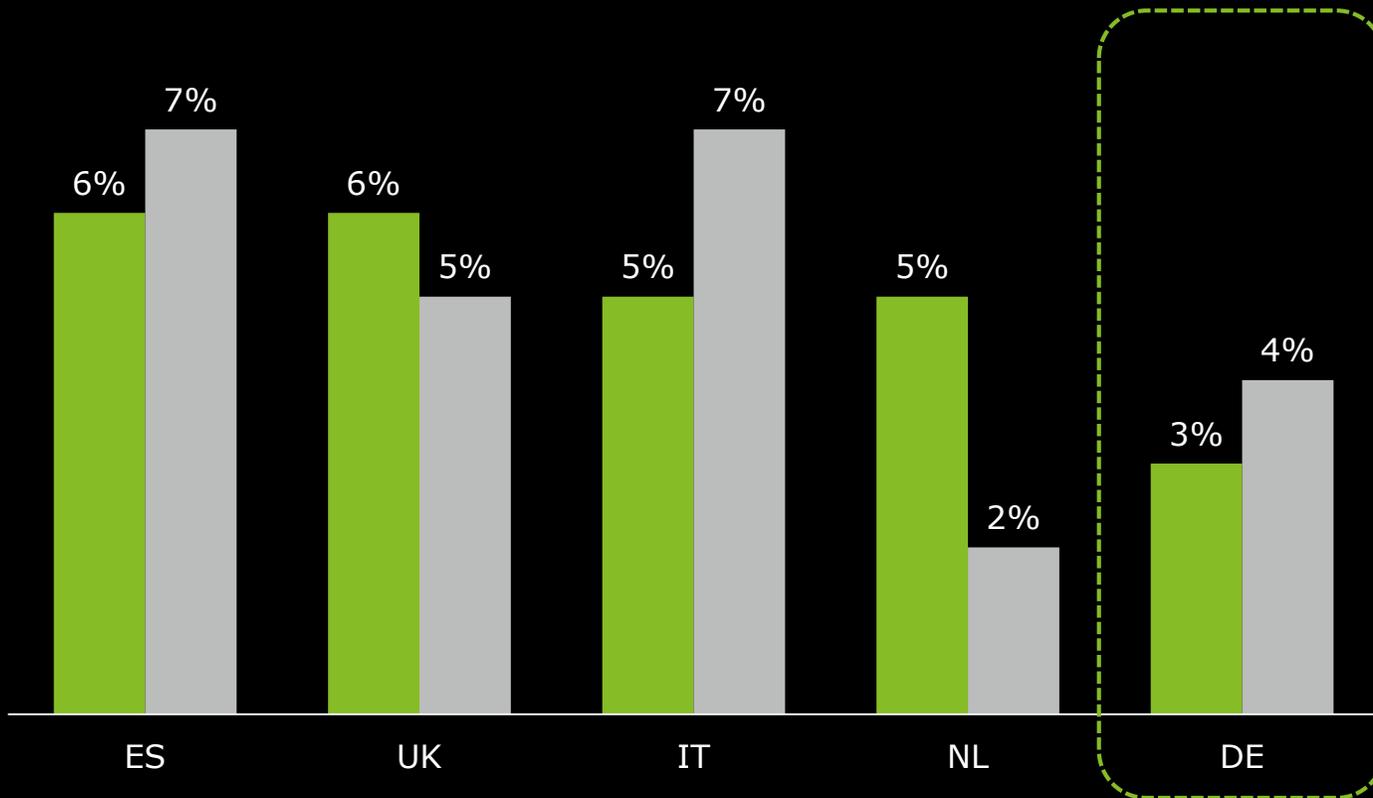
Source: Deloitte Global Mobile Consumer Survey 2017

Purchase intent

Compared to other countries, German consumers are less interested in VR



International comparisons: VR-hardware penetration and purchase intent



- In other countries the initial hype has been better used for actual hardware sales
- German consumers are traditionally reserved about tech innovations
- However, there is no VR-boom in any of the peer markets

Source: Deloitte Global Mobile Consumer Survey 2017

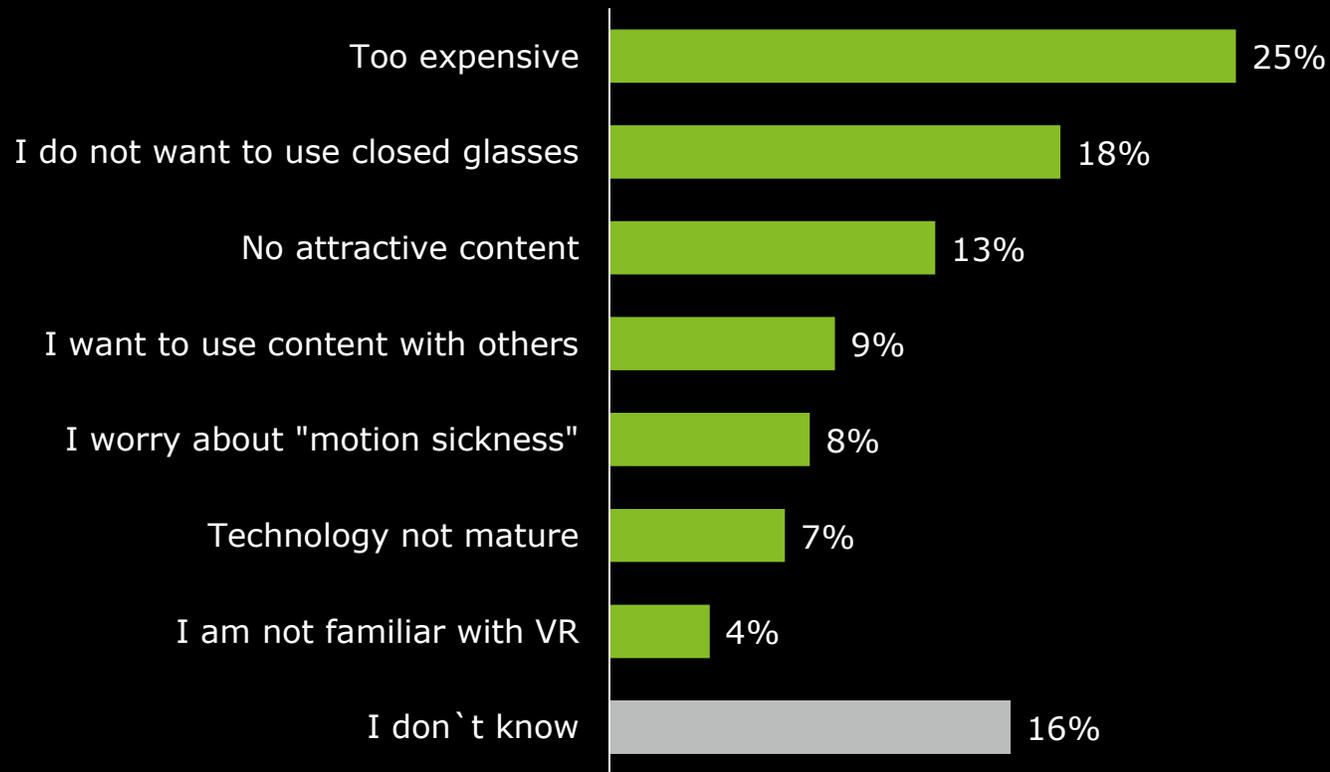
■ Penetration ■ Purchase intent

VR inhibitors

Additional costs and the closed character of VR-headsets limits the success of Virtual Reality



Germany: Reasons for not buying VR-hardware



- The perception of too high costs prevents consumers from buying VR hardware
- Also the closed character of VR headsets is a major inhibitor
- In comparison, the limited content range is a minor factor

Source: Deloitte Media Consumer Survey 2018

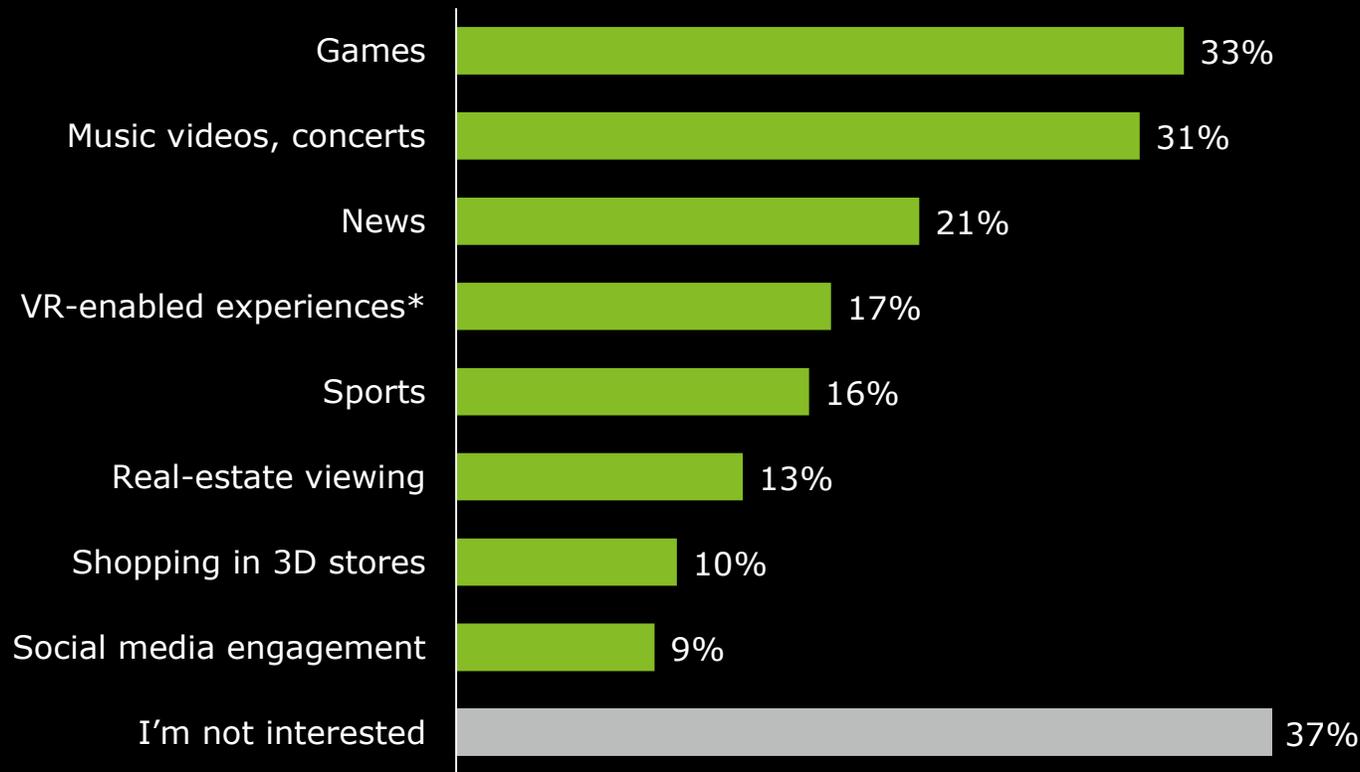
Consumers also value VR
content beyond games

VR content

63% of respondents are interested in VR content – not only in games



Germany: Interest in VR content and applications



- VR content must not focus exclusively on games
- 360-degree music and concert videos promise similar potential
- Broad interest in various VR content categories existent

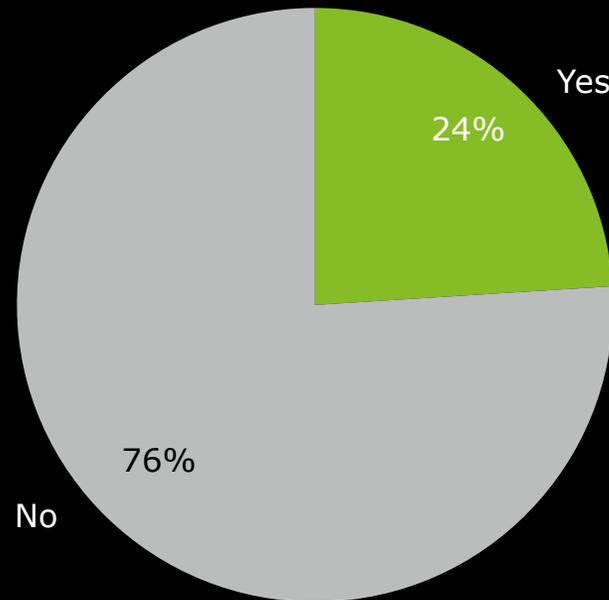
*) flying, travel destinations, etc.
Source: Deloitte Media Consumer Survey 2018

VR content

Looking at the media industry as a whole, VR is no huge driver for paid content



Germany: Would VR or 360-degree experience motivate you to purchase more paid content?



- Less than a quarter of respondents would buy more paid content based on VR
- Survey results illustrate that VR is rather targeting an attractive niche

Source: Deloitte Media Consumer Survey 2018

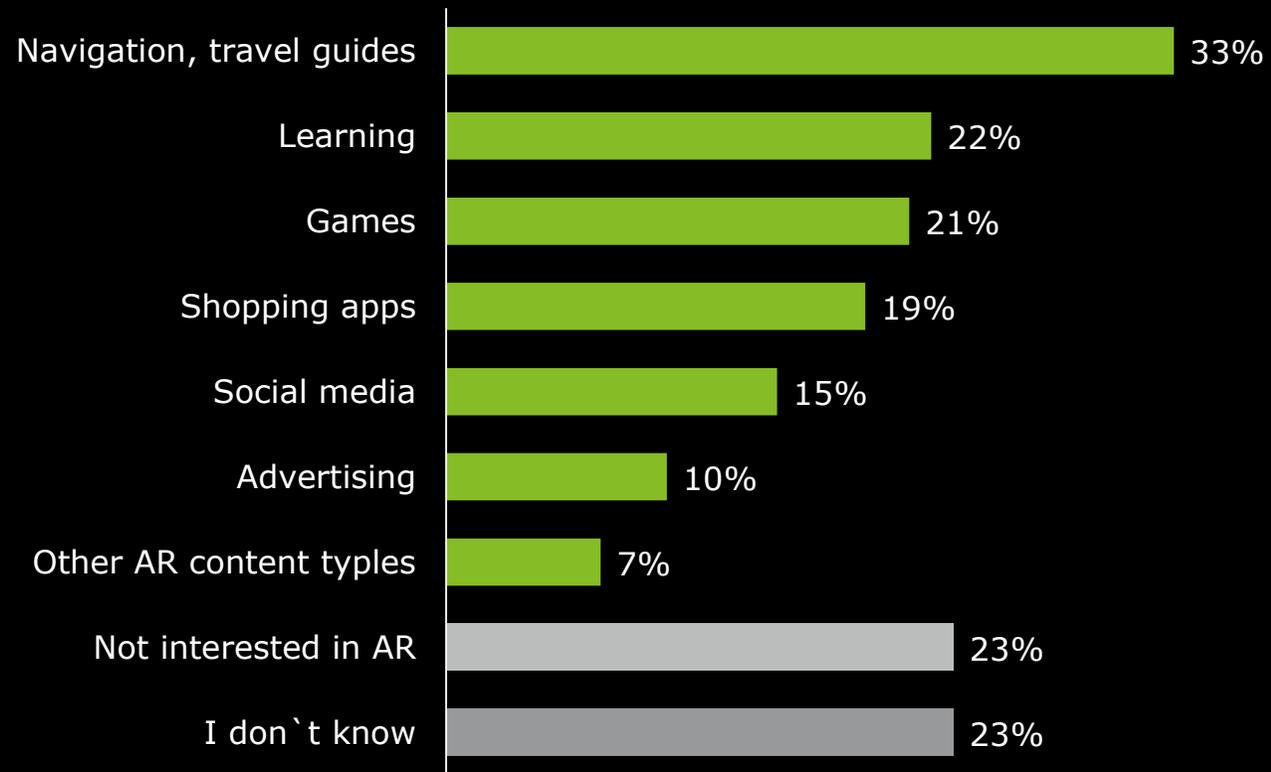
Looking at Augmented
Reality, consumer interest
definitely exists

Augmented Reality

Various Augmented Reality application and content categories meet the consumers' interest



Germany: Interest in AR content and applications



- Majority of respondents is interested in Augmented Reality
- Consumers value AR applications with a practical focus
- Compared to VR, games are less important

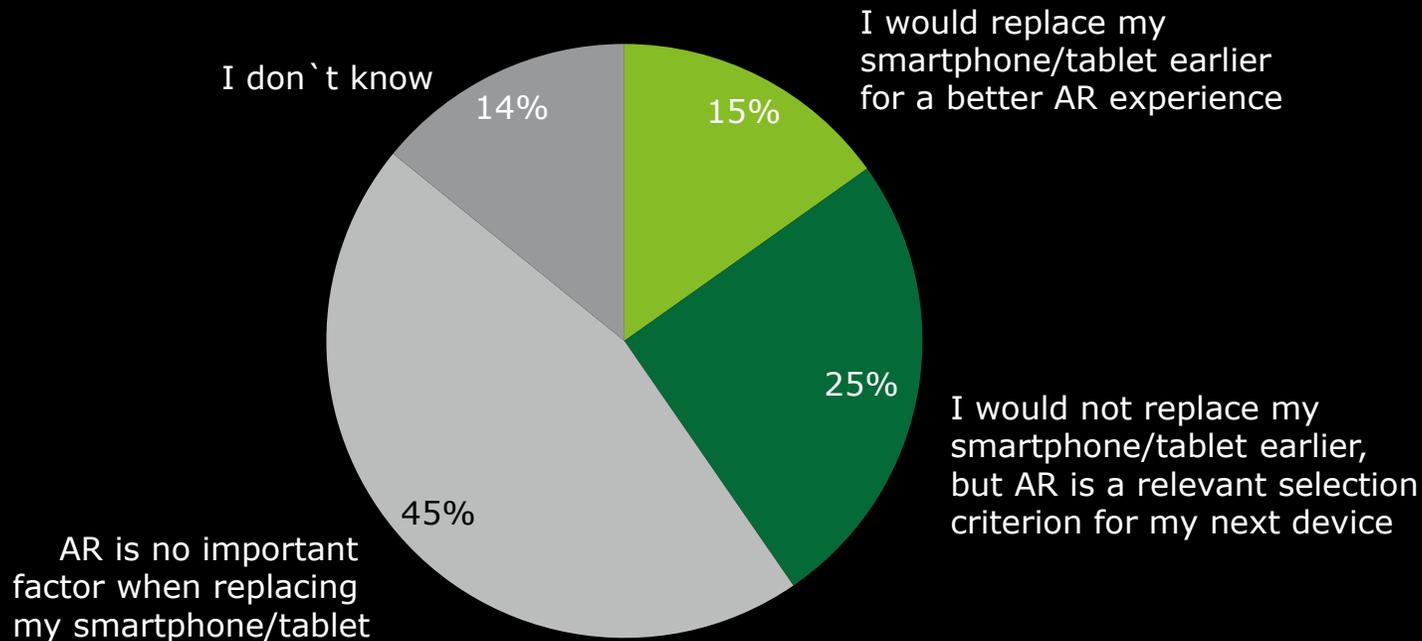
Source: Deloitte Media Consumer Survey 2018

Augmented Reality

However, only few consumers would consider an early replacement of their smartphone or tablet for a better AR-experience



Germany: Are you willing to replace your smartphone/tablet earlier for a perfect AR user experience?



- As yet, consumer interest in AR has only little impact on hardware sales
- AR will foreseeably still become a differentiating feature for smartphones
- Market players must learn from VR and avoid exaggerated expectations in Augmented Reality

Source: Deloitte Media Consumer Survey 2018

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