

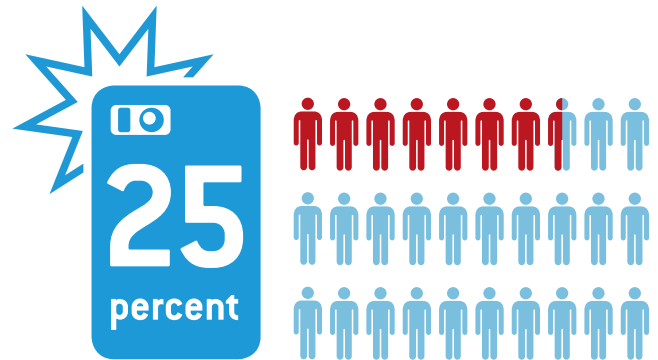
PIV IMAGING TREND REPORT

THE SMARTPHONE MARKET IS FOCUSED ON MOBILE IMAGING

Current market development

Smartphones are the key product of digitization around the globe. In 2017, approximately 1.5 billion devices were sold by manufacturers worldwide [Gartner]. Imaging innovations create strong incentives to buy. For every fourth German, a better camera is a reason to purchase a smartphone [Bitkom]. Mobile photo experiences have become a natural part of life. For 15 percent of consumers, photography is a smartphone function they use daily [Deloitte].

The world of mobile imaging has therefore established a diverse ecosystem of hardware components, specialty accessories, photo and video apps, as well as cloud services and imaging services. In addition, smartphones are gaining importance as the smart home's eye and control center. The future of mobile imaging will be a focal point during **photokina 2018** from 26th to 29th September in Cologne.

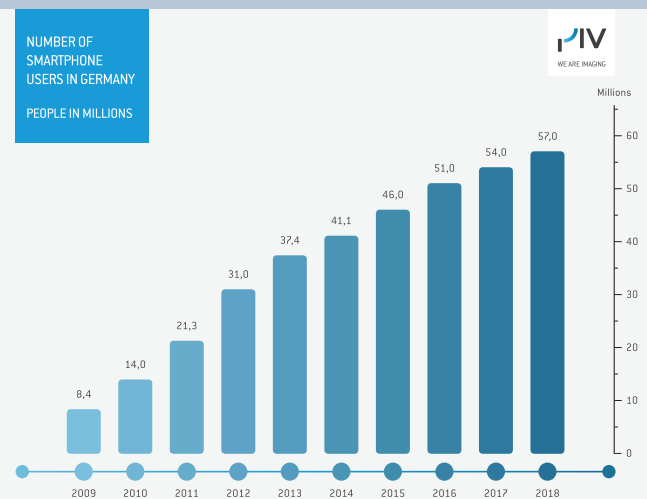


of consumers in Germany purchase a new smartphone because it has a better camera.

Quelle: Bitkom, February 2018

Innovations

- **Dual-cameras with two fixed focal lengths** are becoming the standard. The next step is triple cameras with three lenses. High-intensity optics with variable lenses professionalize low light and long-term exposures.
- **Artificial Intelligence** automates the capture settings, simulates the Bokeh effect more and more realistically, and finds online products using images.
- **3D avatars** created by users using augmented reality are revolutionizing image communication and the market for photo products.
- **High-performance image sensors** enable super slow motion with 960 fps up to 1080p. For the first time, they can shoot 4K clips in HDR.
- **Depth cameras** that can scan facial features increase device safety.
- **Almost borderless XXL displays** create new visual experiences in more price ranges.



SOURCE: STATISTA

Forecast/Prediction

The German market's **growth potential** for mobile imaging is very promising. With device sales at a stable high level, the number of smartphone users will increase dynamically. In particular, the target group of the over-65s' is still under-represented.

Smartphones are the **control center** of everyday life. On the one hand, user growth is fueling demand for photo accessories and software. On the other hand, it strengthens the importance of the smartphone as a touchpoint for photo products-on-demand and other web-based imaging services.

The trend towards **3D avatars** enables innovative services for young target groups.

The **relevance of videography data services** will grow with the upcoming switch from 4G to 5G Internet.

