

IFA Highlights 2016





Smart Home, Appliances & Home Hubs: Rising number of connected devices that are interoperable with leading technology brands, e.g. Apple HomeKit or Google Nest. Voice assistants and also Home Hubs are becoming increasingly popular.



Virtual Reality & SmartTVs: Virtual Reality headsets are getting off the ground in the entertainment industry. First Smart TV prototypes without frame and 8K resolution.



Wearables & Accessories: Wearables for sports, fitness and health use cases are still dominating this device category. The third generation of smartwatches is focused on design and materials.



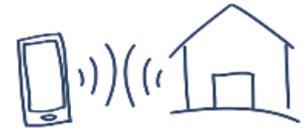
Smartphones & Tablets: Evolution rather than revolution, i.e. manufacturers try to differentiate with technical improvements.



Drones & Robots: Diffusion of high-end technology in mass-market products leads to affordable offerings for various lifestyles. The products are getting more and more intelligent and easier to use.

Smart Home

Established manufacturers expand their product portfolio and many new market entrants focus on niche markets



Established players

Netatmo



Netatmo launches first smart radiator thermostat, which enables energy savings of up to 37%. It includes a window open automation. It can be controlled via Apple HomeKit and voice control.

Philips Hue



Philips Hue is expanding its smart home lighting. 30 new lighting fixtures and lamps should be available from October 2016.

ednet



ednet shows new Smart Home system with focus on security and power consumption. The company presents new two smart home system packages.

New entrants

ThermoPeanut



The smart thermometer is as big as a finger and can be installed everywhere. It transfers the data via Bluetooth and is compatible with Google Nest and IFTTT.

viraCube



A startup from Austria wants to make smart irrigation. Sprinklers only water lawns and flowers, if these actually need water - and not when the timer tells it.

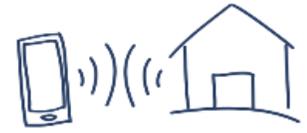
Medion



Medion starts in the Smart Home market with own gadgets and platform at an affordable price. The focus is on the platform, which links the individual components in the house.

Smart Home

Smart Home solution providers show new devices and extend partner network to offer interoperability



Qivicon



- Presentation of the new Home Base 2.0, which is expected to be released in autumn 2016.
- Supporting different radio protocols depending on the country, e.g. HomeMatic IP, ZigBee Pro or DECT ULE.
- Qivicon supports some new third-party devices, e.g. remotes from Logitech, the weather station of Netatmo and some entertainment components of Sonos

HomeMatic



- HomeMatic will support the intelligent lighting system from Osram Lightify from October on.
- It will be possible to create individual lighting scenes for each room.
- Users can also control their system from anywhere at anytime via the cloud.

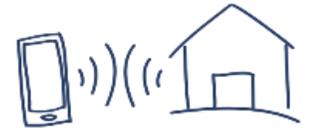
Home Connect



- BSH Hausgeräte announced to enhance their Home Connect Smart Home platform by early 2017
- The platform aims to create a cross-brand digital ecosystem and to add value by providing access to everyday life online services (e.g. HelloFresh, digital cook books etc.) and by integrating third party solutions
- The system can be controlled by the Amazon Echo
- IFTTT is integrated and enables users to create logic rules between different devices and services, e.g. Philips Hue, Nest or Dropbox

Smart Home

White Goods demonstrate how smart household appliances might improve convenience and efficiency



Siemens Induction Air System



Instead of a hood above the stove, the technology is integrated directly between the hobs. Smells and vapors will have no chance to spread in living space. It is connected to the stove and stops automatically when no more pots are on the hobs or the cooking process is finished.

AEG SenseCook



The smart oven relieves cooking through an integrated core temperature sensor. The user simply inserts the thermometer in the steak, the fish or the casserole and the smart oven is doing the rest. SenseCook features a minimalistic design that consist only of rotary knobs, touch sensor and TFT color display.

Miele WT1



The WT1 is the first dryer which uses the TwinDos system from Miele: One cartridge with liquid detergent and bleach stuck directly under the drum, both are at the right time added to the laundry to get an optimum cleaning results. A replacement cartridge can be ordered through the app.

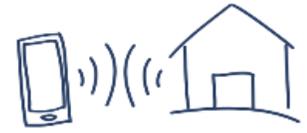
Liebherr BluPerformance



With BluPerformance Liebherr presented a smart solution of a networked refrigerator and freezer. This solution helps the user to have a better food management. The communication of this is regulated by the SmartDeviceBox. You can determine while you are away what you have to buy and what is already in your refrigerator.

Home Hubs & Smart Assistants

Home Hubs & Smart Assistants form a new device category in the consumer electronics market



Mykie



Smart kitchen assistant from Bosch and Siemens that can be controlled via voice. The robot can listen, answer questions, support the users with daily tasks and control smart home devices. Mykie supports its user while cooking with easy and structured instructions and recipes or to order missing ingredients.

Sony Xperia Agent



Sony presented the personal home-assistant robot. It has a screen with a built-in camera on its body enabling two-way video calling. The robot can give notifications, search for relevant information and can be connected with smart home devices, like a smart coffee machine. The product is still in concept phase.

Amazon Echo/Alexa



Amazon Echo resp. Alexa can answer questions, search the web, play music and control smart home devices.

The Echo was not exhibited at IFA but was still present through many other companies announcing their compatibility with Echo/Alexa (e.g. BSH, LG).

Not at IFA

LG's SmartThingQ Hub with Alexa



LG integrated Amazon's Alexa in their SmartThingQ Hub. The SmartThingQ Hub is a speaker with some buttons for control on the top. It has an LCD display on top to show information. The Alexa integration enables voice control. LG has not announced a release date yet.

Virtual Reality

Virtual Reality is now taken up by numerous players since it has the potential to revolutionize home entertainment



Samsung Gear VR (SM-R323)



By snapping a Samsung Galaxy Smartphone into the headset you will get a wireless and portable virtual reality machine. It creates lively surroundings and realistic movements by using a super AMOLED screen and a powerful processor.

Zeiss VR One Plus



The VR One Plus features a universal smartphone tray that can hold devices with screens measuring 4.7" to 5.5". It also has an eye box, which is large enough to accommodate eye glasses.

Alcatel Vision VR



Alcatel's VR is a standalone headset – one that does not need a computer or smartphone to work. To achieve this, they implemented a smartphone of its own into the headset, providing users the possibility to move freely.

Epson Moverio BT-300



Epson presented the Moverio BT-300 as the lightest and sleekest AR glasses at present. For the two displays Epson will use the OLED-technology. The product comes in two parts: the glasses and the controller.

Virtual Reality

The momentum of VR is driving use-cases beyond entertainment



Exemplary usage scenarios



Medical

- Surgical training for students and doctors
- Social cognition training for people with autism
- Pain management



Training and Education

- Test flights for NASA
- Military and law enforcement strategic training
- Virtual studying (schools, universities, etc.)



Retail and Shopping

- Virtual shopping experience
- Augmented kitchen or bathroom configurations



Gaming

- Many brands are supporting gaming, e.g. Sony or Ubisoft with „Eagle Flight“
- Several demos of established game franchises

Challenges and Opportunities

Virtual Reality can be a big opportunity, but still lacks in optimised and native content. Big players have announced not only their interest, but their commitment to this technology (e.g. Sony or Samsung), however content must be provided in order to maintain the interest for the customer. 3D TV experienced a similar hype a few years ago, but eventually ceased due to similar challenges.

SmartTV

SUHD, OLED, HDR – the TV manufacturers at IFA promise an even sharper television experience



Samsung SUHD KS9590



Samsung launches a new 4K TV from the SUHD series - which works with quantum dots and is fit for HDR movies with enormous brightness.

Panasonic OLED



Panasonic shows a transparent OLED display and OLED prototype, which could be used to replace an glass surface.

Sony ZD9 series



Sony presented the ZD9 series with Ultra HD resolution and mega contrast for the HDR standard, because of the Backlight Master Drive technology.

Sharp presents 8K and ...



Sharp has launched the prototype of a 27-inch TV with 8K resolution with the IFA. The device can display 16 times as many pixels as a FullHD TV. However, until such screens are ready for mass production, it will still take years.

... first TV without frame



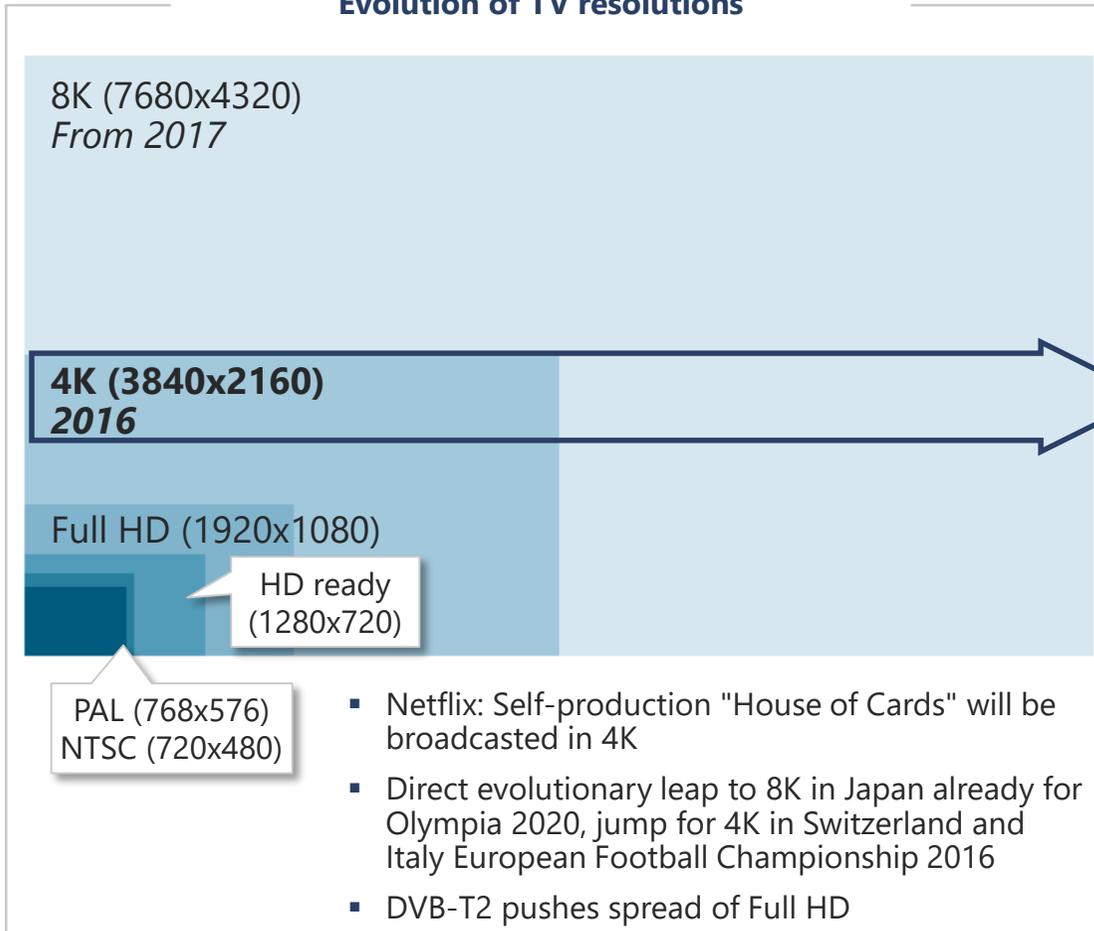
Sharp also demoed at the IFA the first prototype displays, that come completely without a frame. What they will cost and when the technology will be released is not yet exactly known.

SmartTV

UHD and 4K promise quick enforcement over the next years

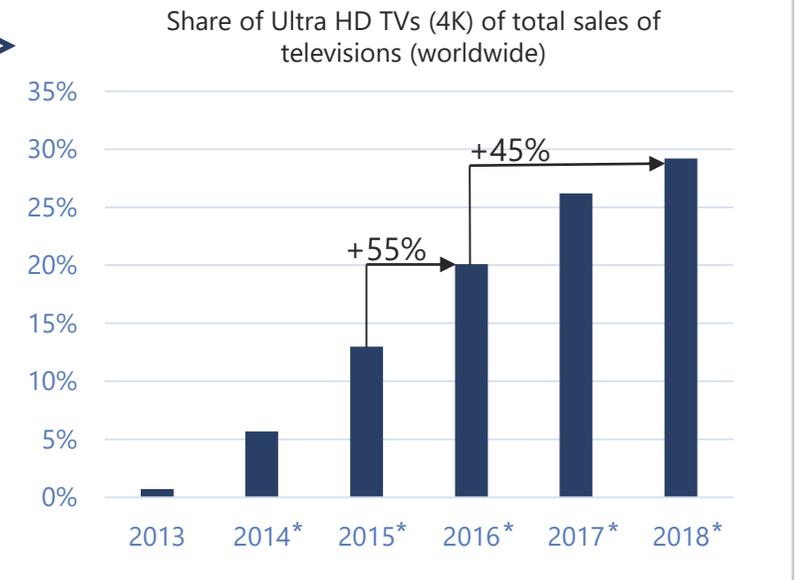


Evolution of TV resolutions



Rapid growth in 2016

- 4K/UHD sales have increased continuously over the past years
- Worldwide 4K/UHD TV sales are expected to reach >330 million by 2019 (2013: 2 millions)
- 4K/UHD share of the total TV hardware market will reach approximately 29%



Smart Watches

The third generation of smart watches shows appealing design and materials



Samsung Gear S3 Classic / S3 Frontier



The Gear S3 is similar in design to its S2 predecessor. It comes in 2 versions: one called S3 Classic and the other one S3 Frontier. New features are e.g. GPS and an SOS mode.

Asus Zenwatch 3



The watch is running on Android Wear. Notifications are controlled from the ZenWatch Manager smartphone app, whilst a new fitness tracking platform records all trainings. It will be available in rose gold, gunmetal and silver.

Alcatel MoveTime WiFi



The MoveTime WiFi is still based on Alcatel's own OS and does not feature Android Wear. It enables the user to make and receive calls directly from the device. The watch also tracks all of the users exercise data.

Fossil Q Marshal / Q Wander



Both Fossil smartwatches are designed to be more fashionable than they are functional. But the Snapdragon Wear 2010 that's on the inside add some features like GPS and location tracking.

Garmin Fenix Chronos



With the Fenix Chronos Garmin launched a luxury smartwatch. The Chronos supports GPS and can track a variety of different activities. Other features include all-day activity tracking and notifications.

Withings Steel HR



Withings latest activity-tracking wristwatch offers the user fitness tracking and a heart-rate monitor as well as smartphone notifications. The battery lasts 25-days.

Wearables

Fitness, sports and health devices with more and more functions are floating the market



TomTom Touch



Beside usual activity tracking features like steps, sleep, calories and distance tracking, it also provides a body composition measurement.

Garmin Forerunner 35



The smartwatch offers pace, distance and time data as much as a real-time readout of heart rate and heart rate zone. It also works as a fitness tracker.

Philips Health Watch



This health watch analyses fitness activity and values via a Smartphone App (Philips HealthSuite) and gives personalized health advices.

FitBit Charge 2



This fitness tracker documents activities like running, biking etc., but you can also track specific workouts. It has a heart-rate tracking built in but no onside GPS, you have to connect to your Phone.

TomTom Spark 3



TomTom did redesign the TomTom Spark 2 and added some new features like a barometer, which unlocks new metrics like 3D distance tracking, and new sport modes.

Polar M600



The Polar M600 measures the pulse during training directly on the wrist. The Polar M600 can also use the heart rate sensor H7. It is compatible with the Polar Bluetooth Smart running and wheel sensors.

Smart Accessories

Innovative devices capture new market and feel good segments



Garmin Virb Ultra 30



Virb Ultra 30 is a 4K Action Cam from Garmin with voice control and image stabilizer for mountain bikers, climbers or whitewater kayakers.

Hasselblad True Zoom



Hasselblad has developed True Zoom for the Moto Z Play, which enables the user to turn the phone into a digital camera with lens with ten times optical zoom, Xenon flash and a 1 / 2.3 inch 12 megapixel sensor with image stabilizer.

Motorola VerveCam+



The Motorola VerveCam+ is also called a social media camera. The user of the camera is connected with an impact resistant shell around the neck or attached to it with a clip on the collar and streams the images via smartphone live into the internet.

Sony MDR-1000X



The Sony MDR-1000X are wireless headphones with noise-canceling, that filters background noise. The user can hold a hand over the shell to switch features on and off.

Dyson Pure Hot+Cool Link



Pure Hot+Cool Link is a mobile fan, which also works as a heater, and even as an air purifier. With a combination of a HEPA fiberglass and an activated carbon filter the fan cleans the air.

AfterShokz Trekz Titanium



AfterShokz presents the new Trekz Titanium. Technology has evolved and now offers a clear reproduction and a good bass. Sound leakage is prevented, music and phone calls do not penetrate to the outside.

Smartphones

Brands try to differentiate their Smartphone by focus on camera quality and design



Archos 50 Saphir

Outdoor



5.0" HD display consisting of gorilla glass and a case consisting of rubber/gum. Due to this robust outside the smartphone resist dirt, water and downfalls.

Lenovo K6



First smartphone of Lenovo under it's own brand. It has a 5.0" FHD display, 13 MP back and 8 MP front camera. Running on Android.

SONY Xperia XZ



5.2" display with full resolution. 23 MP rare camera with 3D sensor technology, this means it has a laser autofocus and a RGBC-infrared sensor.

Lenovo Phab2



6.4" QHD phablet, first phone with Google Tango (extended AR/VR capabilities). Other features are Dolby Atmos 5.1 and 3 microphones for 360 degrees audio capturing.

Huawei Nova



5.0" display with 1920 x 1080 resolution, 12MP back and 8MP front camera. Videos can be recorded in 4K quality.

Motorola Moto Z Play



5.5" super-amoled display with FHD, up to 50 hour battery, 16 MP dual autofocus camera. Compatible with the Hasselblade-module.

Tablets

Devices focus on design and entertainment



Asus ZenPad 3S 10



The premium-tablet with an aluminium body weighs just 430g and is only 5.8mm thin. It comes with lively visuals, cinematic audio, and is running on Android.

Lenovo Yoga-Book



Lenovo's Yoga Book is a 10.1" laptop-tablet hybrid whose "bottom" half is a touch surface and attached via a variation on Lenovo's 360-degree watchband hinge. It can operate as a laptop, a tablet and a digital art tool.

Alcatel Pop 4 (10)



10.0" IPS-display with 1920 x 1200 resolution. The Alcatel Pop 4 is running on Android with a battery which is up to 450 hours in Standby mode.

Trekstore SurfTab theatre 13.3



The SurfTab theater 13.3 is an entertainment tablet with a 13.3-inch Full HD display and four stereo speakers. It runs with Google Android 6.0 marshmallow and is particularly suitable for streaming movies.

Drones

Commercial drones main use case is still filming, but the devices tend to get smaller, easier to use and cheaper



Selfie Drones: Dobby by Zerotech or Breeze 4K by Yuneec



Smart pocket drones controlled by a smartphone. Features are a 13-megapixel/4k camera, facial recognition, target tracking, voice enabled control (launching the drone by calling its name), take off from and land on the user's palm and flying tricks like barrel rolls

Archos Drone



Entry-level drone with limited features like remote control, smartphone app and 1 megapixel camera.

EHANG Ghostdrone with AR control



The EHANG Ghostdrone can be controlled via tilting and inclining of a smartphone. A VR headset enables control from the drone's perspective, and a 4K camera is integrated as well.

Poweregg by PowerVision



Powerful drone featuring a 4K camera with 360 degree functionality. It has a range of 5km to stream live videos to the smartphone. Can be controlled via gestures.

Robots

Robots are getting smarter and better connected, yet the most common use-case is still cleaning



Cleaning

Neato robvac



Neato D3 Connected and D5 Connected are the new generation of vacuum robots by Neato, that can be controlled via an app.

Ecovacs Unibot



Robotic vacuum cleaner and smart home hub to control smart home devices, clean air and smoke detector. Launch in 2017.

Windowmate



Window cleaning robot that is essentially a robot mop with sponges attached to the base that works vertically.

Service

Sanbot



Service robot from Qihan with the goal to meet human's needs. Has an appearance like a little android with a touchscreen, digital eyes and flipper arms. Equipped with sensors, cameras for security, video calls and 3D for spatial awareness, facial and voice recognition. For home, museums, shops, hospitals, schools etc.

Toy

Sphero BB-8



Star wars robotic toy ball that can be controlled via an app, can switch a room on its own, map out parts where it cannot move and using augmented reality, it can deliver holographic messages to a smartphone.

mm1 – the Consultancy for Connected Business

Key facts and origins

- Founded in 1997 by experienced McKinsey consultants
- 50 consultants with more than 300+ successful consulting projects
- Expertise in IoT business models, new product development, improving customer experience, optimizing processes and organizational capabilities

There will be 4bn mobile subscriptions worldwide

2016

Over half of the world's Internet traffic will come from Wi-Fi connections

Global data volume reaches 88,000,000,000 terabytes

Ubiquitous networked connections between people and things offer new business opportunities and challenges. We help organizations to facilitate the development, implementation, and marketing of new products and services that cater to an increasingly digital world.

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