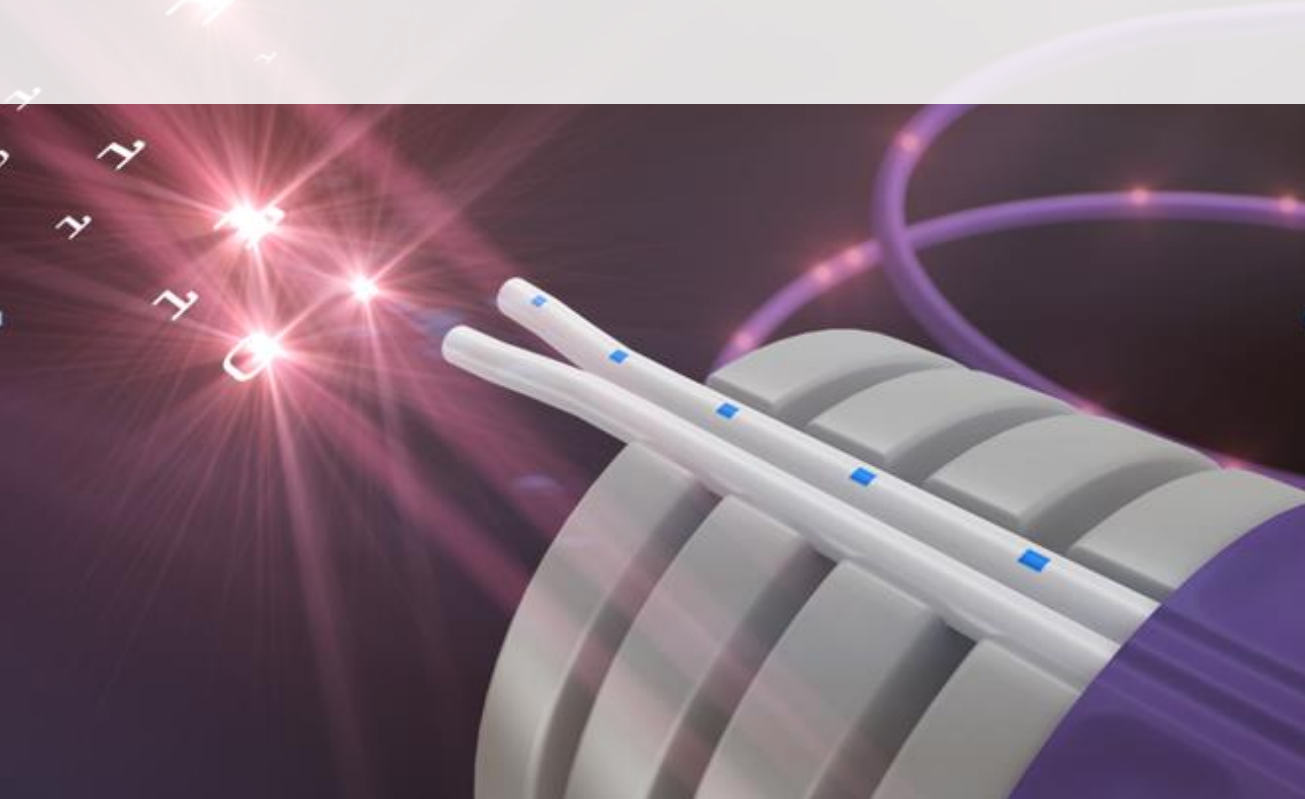


Home network system

Opportunities for GEPOF



- DRAINAGE SYSTEMS
- ELECTRICAL SYSTEMS
- BUILDING TECHNOLOGY
- INDUSTRIAL PRODUCTS

## Facts and figures

- third generation family owned business
- established as „Fränkische Isolierrohr- und Metallwaren-Werke Gg. Schäfer & Cie“ in Schweinfurt in 1906 as part of Kugelfischer
- headquartered in Königsberg, Germany
- facilities in Europe, America, Asia and Africa
- industry leader in the design, manufacturing and marketing of corrugated plastic pipe systems
- over 2,500 employees worldwide
- approx. 1.5 million meters of pipe are produced every day
- sales of approx. 385 million euros for the fiscal year 2013/14



# ELECTRICAL SYSTEMS

Electrical conduits made of plastic and metal suitable for

- concealed installations and cavity wall installations
- installations in concrete
- exposed installations
- sub-soil installation
- cable protection and pipes for industrial applications
- market leader in Germany
- key customers are electricians
- distribution via wholesalers



## general approach

- development of a conduit for electrical installation with integrated POF
- now we also provide electronical equipment for home network installations with 100 Mbps
- network system for the average electrician
  - focus on domestic constructions
  - ideal for single- or multi-family houses, multiple dwelling units and hotels
- in 2013: conclusion that the market demands higher performance – start of a GEPOF project

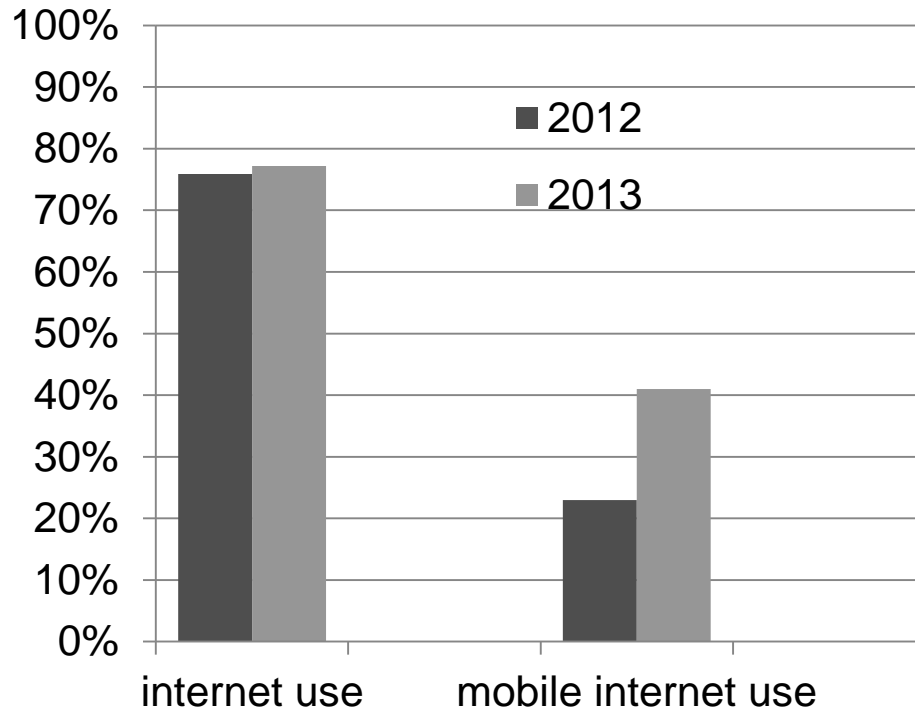
DRAINAGE SYSTEMS  
ELECTRICAL SYSTEMS  
BUILDING TECHNOLOGY  
INDUSTRIAL PRODUCTS

## advantages over other technologies

- POF in general
  - flexibility, size and weight of the fiber
  - electromagnetic tolerance
  - no electric potential
  - sustainability and durability
- POF - home network system
  - very easy to handle without special tools
  - fast installation without special know how
  - plug and play
  - no measurement
  - demand-orientated
  - flexible and expandable

DRAINAGE SYSTEMS  
ELECTRICAL SYSTEMS  
BUILDING TECHNOLOGY  
INDUSTRIAL PRODUCTS

## need for structured home network systems



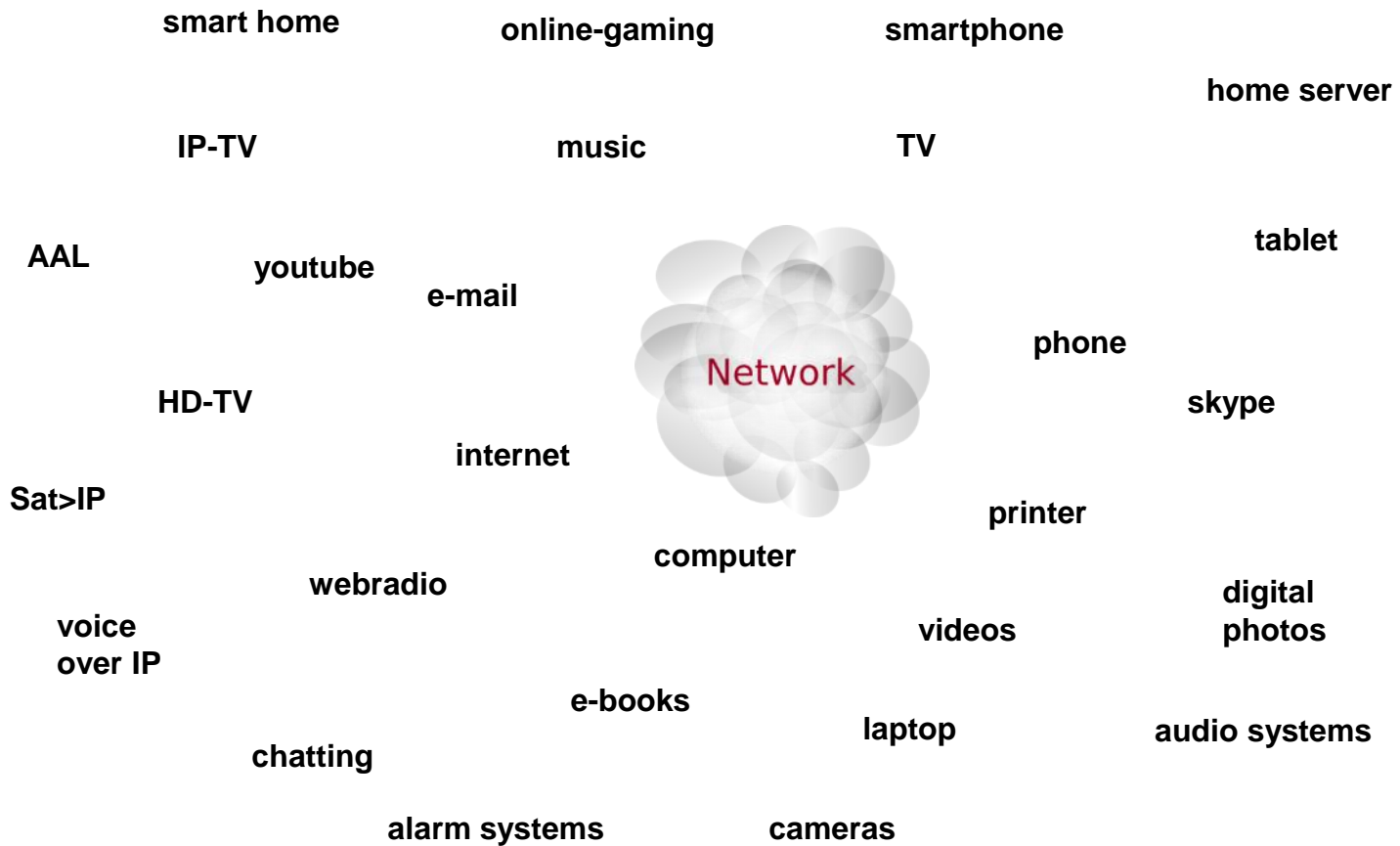
source: <http://web.ard.de/ard-chronik/index/8183?year=2012&month=8>

**Germany in 2012:**

- 250 MB traffic per month and access (mobile)
- 13,200 MB traffic per month and access (cable)

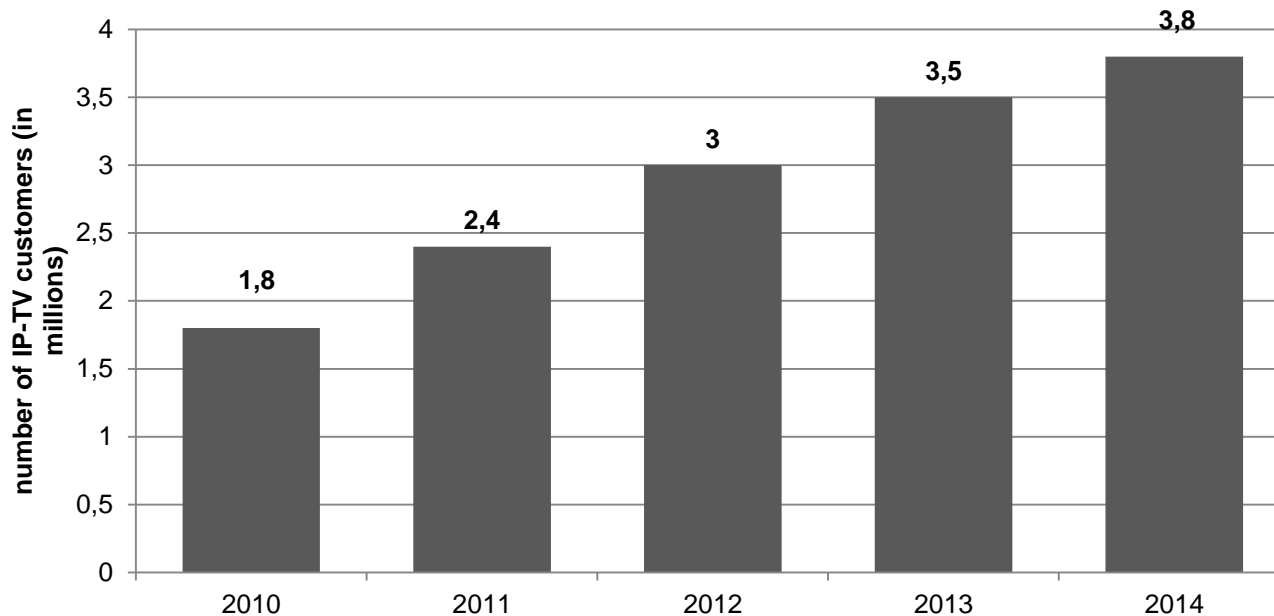
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**need for structured home network systems**



## IP-TV

projection for IP-TV customers in Germany, Austria and Switzerland (in millions)



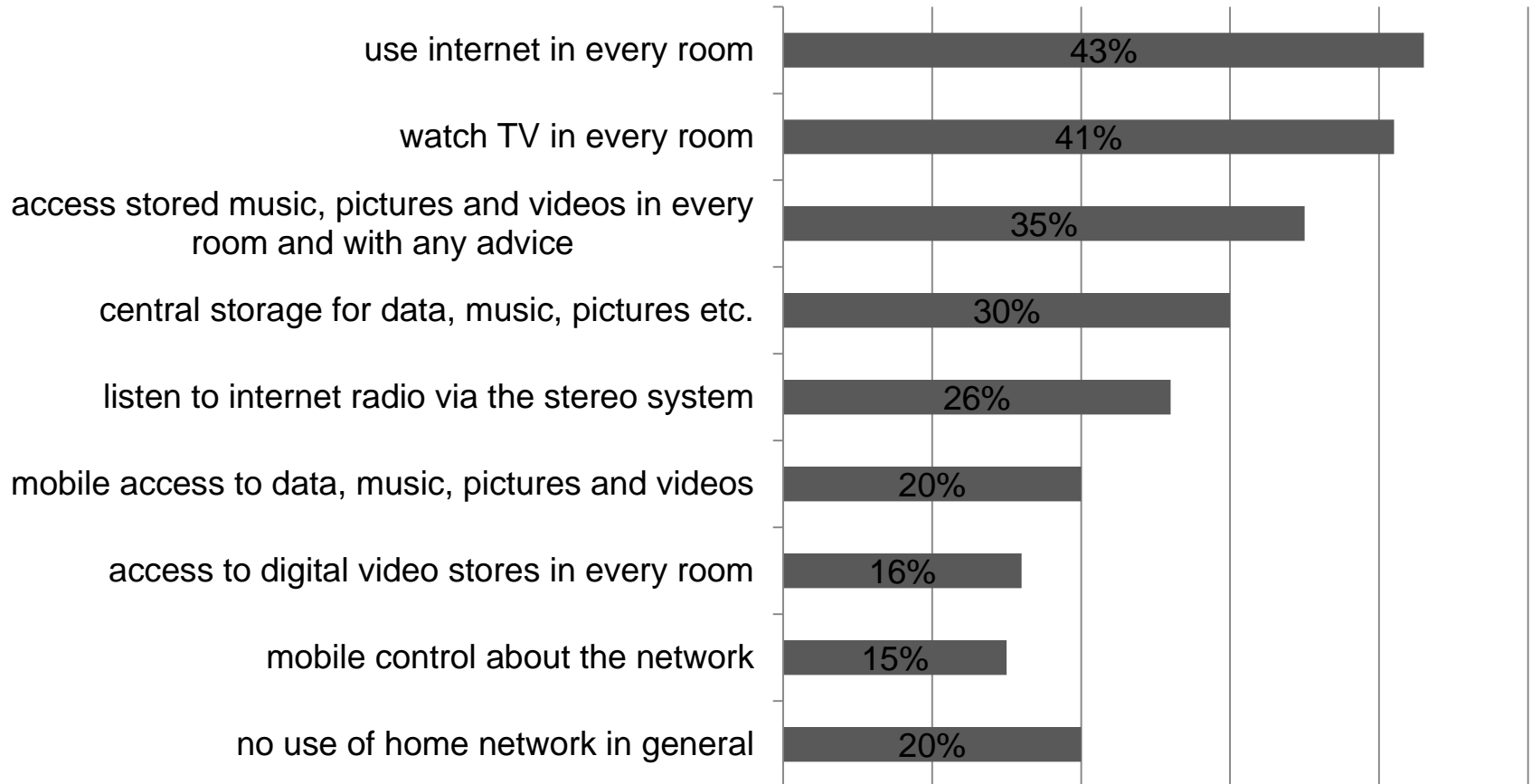
source: statista.com

Digital TV Western Europe Report:

Until 2020 the number of IP-TV users grows by 38% in Western Europe.

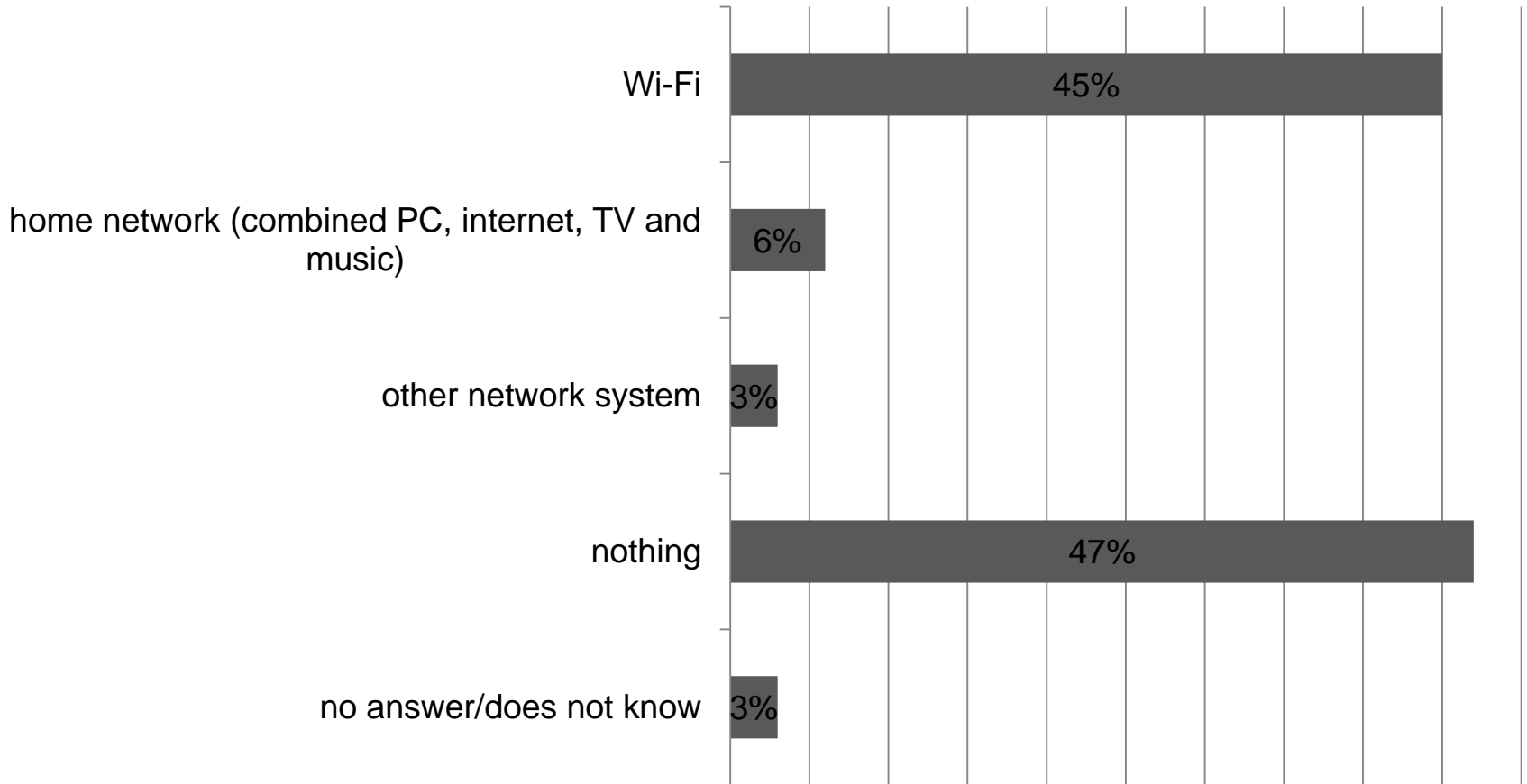


## criteria for home network systems



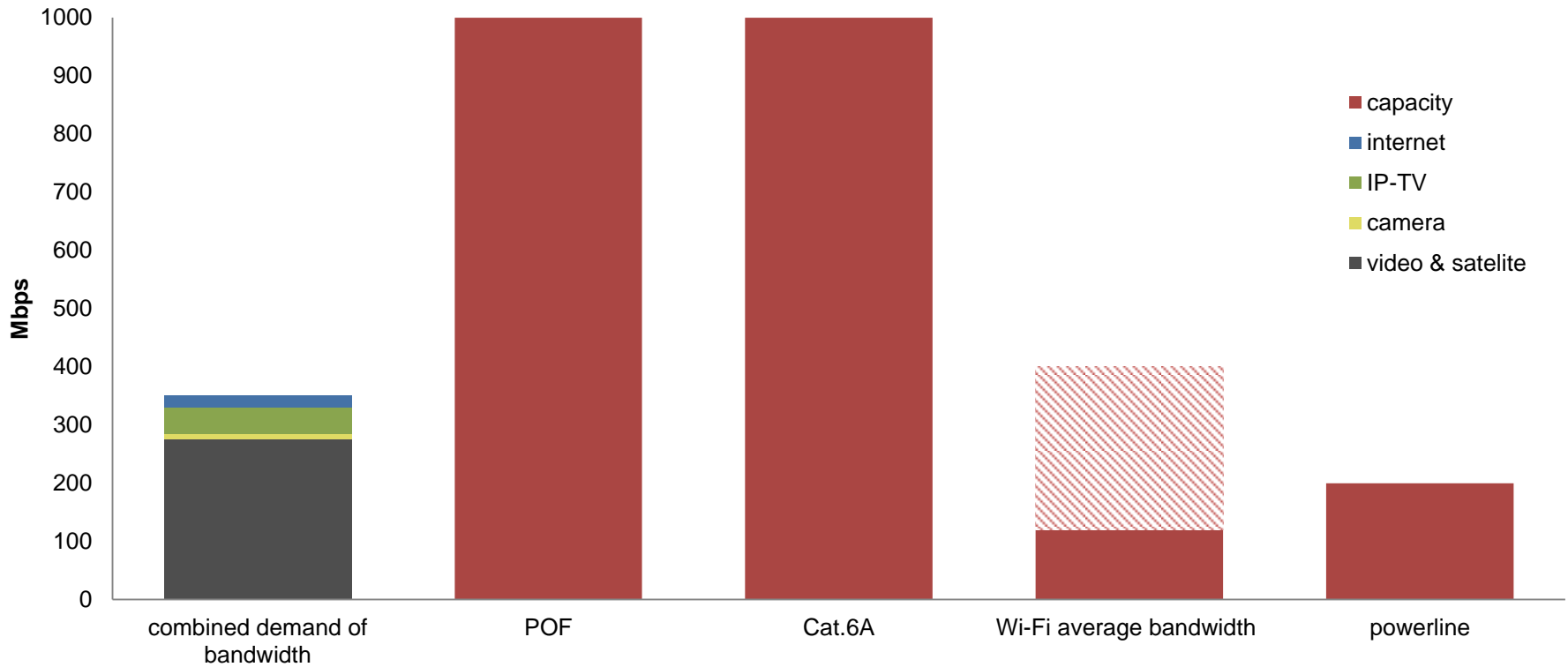
for Germany, age 18-69, source: statista.com

# What network do you use in your home?



for Germany, age 18-69, source: statista.com

need for structured home network systems



own graphic

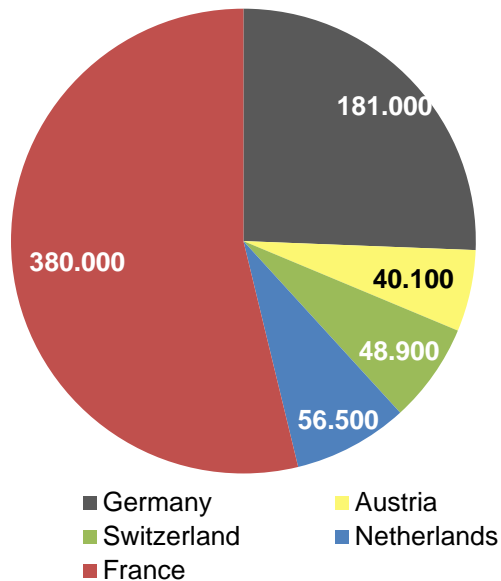
## need for Gigabit Ethernet

- current copper systems provide 1 Gbps bandwidth
- 100 Mbps is perceived to be too slow in the market
- as seen before, for future applications 1 Gbps will be necessary

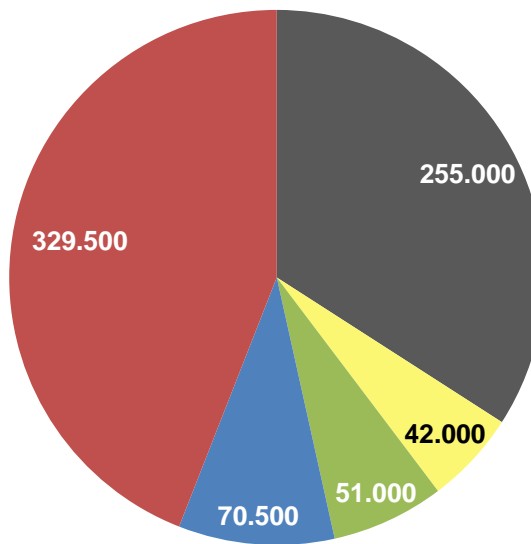
DRAINAGE SYSTEMS  
ELECTRICAL SYSTEMS  
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INDUSTRIAL PRODUCTS

## target market

new apartment constructions  
in 2012



new apartment constructions  
in 2017



- in Germany approximately 8 mio. people want to modernize their homes within the next 2 years

<http://de.statista.com/statistik/daten/studie/173647/umfrage/heimwerken---modernisierung-von-wohneigentum/>  
and own research

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## target market

- target customer is the electrician
- we want to provide a system which can be easily installed and enables the electrician to offer a greater value to his customers
- the electrician is the one who can convince them to invest in a future-proof home network system
- therefore we have to reach the mass market

**FRÄNKISCHE**



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## need for standardization

- measurement protocols are needed and wanted
- architects and electricians rely on standardized products
- products have to be highly reliable for the mass market
- distributors want to have alternative suppliers
- other companies have to join our approach in this system
- for international markets we need to have compatible products

A uniform standard is necessary to ensure the reliability, marketability and future advancement of the technology.

DRAINAGE SYSTEMS  
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Questions?





## contact information

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