

DEUTSCHE TELEKOM CAPITAL MARKETS DAY 2018



LIFE IS FOR SHARING.

EUROPE

SRINIVASAN GOPALAN

KEY MESSAGES

01 **STRONG ASSETS PORTFOLIO DT EU**
Majority of assets already converged, with a powerful brand across footprint & relevance in economies

02 **BEGINNING OF TURNAROUND TO GROWTH**
Markets are growing again, DT EU net adds are at fair share, and EBITDA is now growing

03 **ACCELERATE GROWTH IN CONVERGENCE**
Drive volume & scale up fast to reach > 50% FMC HH penetration (by 2021) with strong Magenta1 portfolio and go-to-market based on advanced HH analytics

04 **LEAD TRANSITION TOWARDS GIGABIT SOCIETIES**
Develop assets portfolio to fully converged, triple fiber rollout run-rate until 2021

05 **BEST CUSTOMER EXPERIENCE**
Strong & convincing brand promise, digital customer interaction, automated technical service, and a customer centric culture

06 **LEAD IN BUSINESS PRODUCTIVITY**
Leverage leading ICT position in key verticals, push Cloud & DT's Smart Cities/IoT portfolio, key partner for digitalization in VSE & SMB¹ segments

07 **VALUE TRANSFORMATION**
Around 10% net indirect cost reduction until 2021, driven by operational efficiency measures, simplification, digitalization, and a future-proof-organization

08 **FINANCIAL OUTLOOK**
Clear strategic plan for sustainable growth with a revenue CAGR of > 1% and EBITDA CAGR of +1–2% (2017–2021)

¹ VSE = very small enterprises, SMB = small and medium size businesses

REVIEW 2014 – 2018

GROUP STRATEGY

GERMANY

SYSTEMS SOLUTIONS

TECHNOLOGY & INNOVATION

T-MOBILE US

EUROPE

GROUP DEVELOPMENT

FINANCE

REVIEW

TECHNOLOGY LEADERSHIP

BEST CUSTOMER EXPERIENCE

SUPERIOR CASH PERFORMANCE

Ambition level 2018

- All-IP transformation: All integrated NatCos 100% IP-based in 2018
- Next generation accesses: 75–95% LTE pop coverage in 2018
- FTTx for ≈ 50% of households (in integrated footprint) with at least 100 Mbit/s in 2018

- Realization of customer experience initiative “eTransformation”: between 30% and 99% eService share in our NatCos in 2018
- Implementation of innovative FMC & TV experiences in 2018
- €0.6 bn pay-TV revenues in 2018
- Continuation of revenue transformation: 38% of revenues with pockets of growth in 2018 [Pro Forma: 36% of revenues with pockets of growth]

- Stable Adj. Cash Contribution ≈ +0.5% CAGR 2014–2018
- Reduction of indirect cost by €0.4 bn 2018 vs. 2014
- Op. ROCE improvement by around +2%-pts 2018 vs. 2014

Achievements 2017

- Ca. 70% in 2017
- 94% in 2017
- 32% in 2017

- 31%–95% in 2017
- Hybrid Proposition, new TV user interface rollout
- €0.48 bn in 2017
- 33% in 2017

- CAGR 2014–2017 -6.7%
- €0.24 bn 2017 vs. 2014
- -2%-pts 2017 vs. 2014

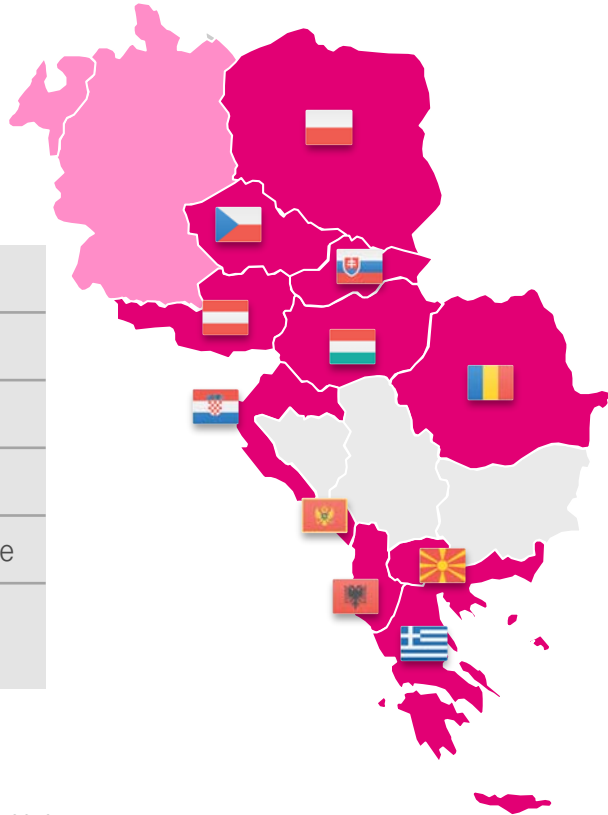
Delivered/on track



DT EUROPE IS A STRUCTURALLY ATTRACTIVE CONVERGED ASSET

DT Europe

REVENUE	€11.6 bn
ADJ. EBITDA	€3.7 bn
CASH CAPEX	€1.8 bn
PERSONNEL	47,420 FTE
POPULATION	115 mn people
GDP CAGR¹ 2017-2021	2.5%

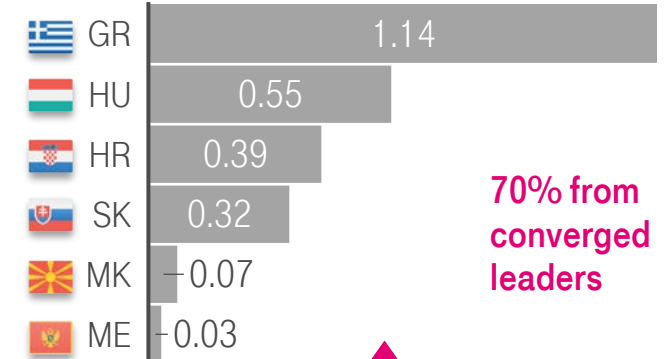


¹ GDP CAGR average weighted by NatCos' 2017 revenue

NatCo-by-NatCo

EBITDA adj.
FY 2017,
€ bn

CONVERGED LEADERS



CONVERGED CHALLENGERS



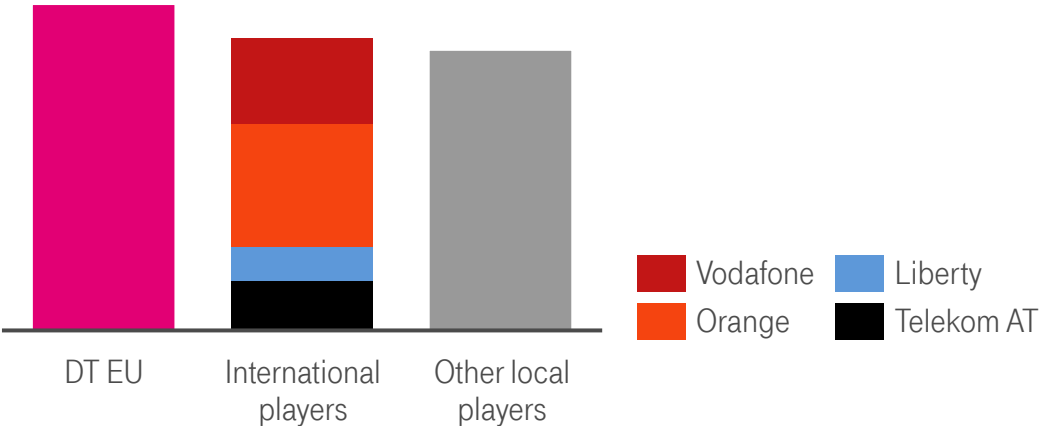
70% from
converged
leaders

Proposed acquisition
of UPC

DT IS THE LARGEST INTERNATIONAL PLAYER IN OUR FOOTPRINT WITH SIGNIFICANT GDP IMPACT

We have scale in our markets...

Integrated revenues DT EU footprint¹

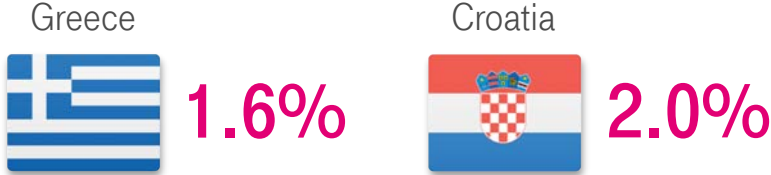


Enormous power of our brand across footprint

¹ Based on 2017 revenues

... and we have economic impact

DT local revenues, as share of GDP

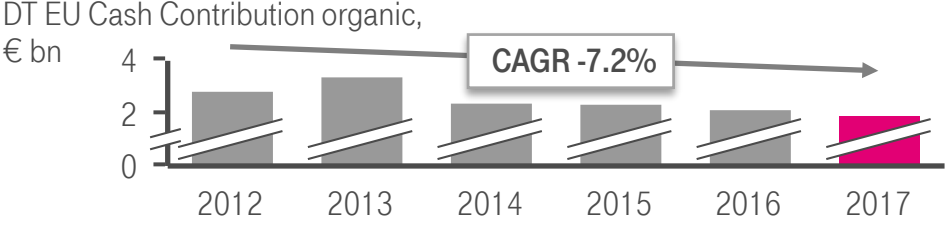
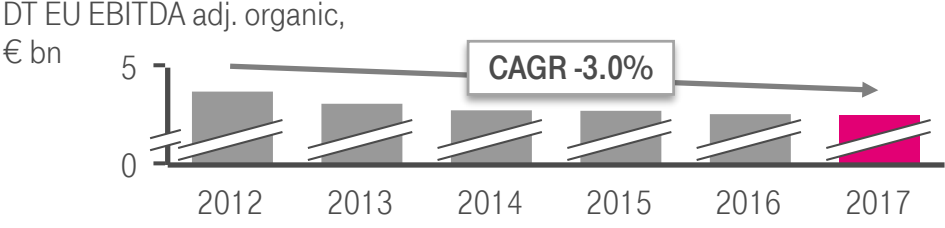
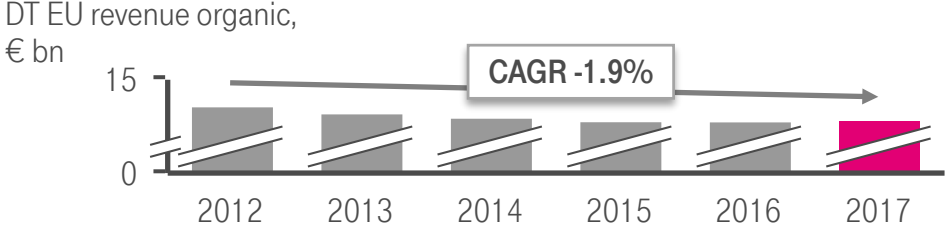


DT's position in ICT

revenues with ICT, focused on digitalizing governments, societies & enterprises **≈€1 bn**

WE HAVE BEEN POORLY VALUED BECAUSE OF PAST PERFORMANCE

Reflecting historical declines...



Note: Organic development adjusted for regulation and currency effects, Cash Contribution in 2012 & 2013 only adjusted for T-Mobile Netherlands and Globul (Bulgaria). ¹ As of May 18th, 2018 based on a basket

CAGR 2012-2017

...DT Europe has been valued poorly

EBITDA multiple DT Europe

≈4.9x¹

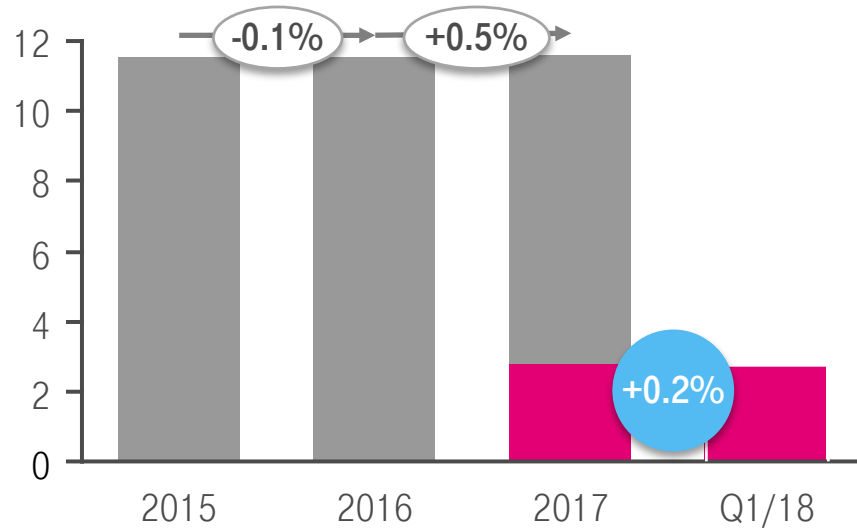
EBITDA multiple western European incumbents

6.3x

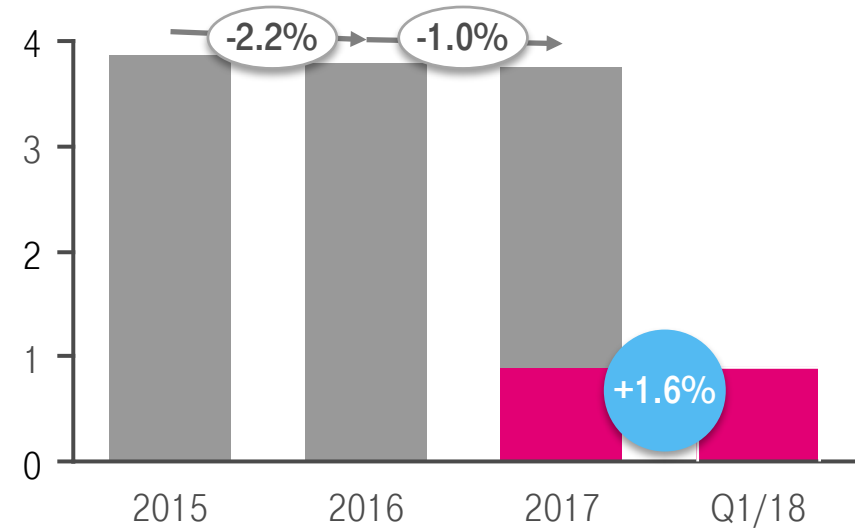
2017 HAS SEEN THE BEGINNING OF THE TURNAROUND

Back to growth again

Revenue growth, organic,
€ bn



EBITDA turnaround visible, adj. organic,
€ bn

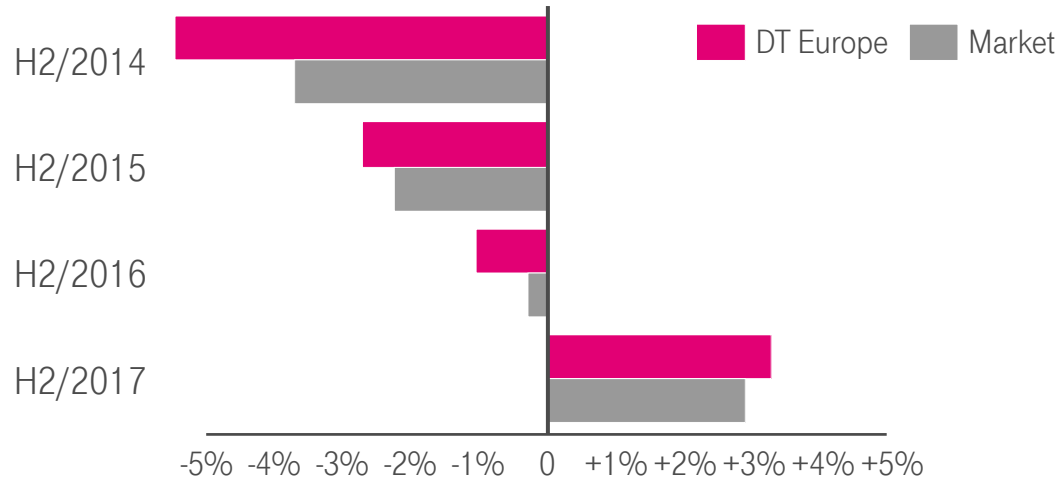


Note: Organic development adjusted for regulation and currency effects.

MOBILE MARKETS BACK TO GROWTH, DT BACK TO FAIR SHARE

Improving market environment leads to growth...

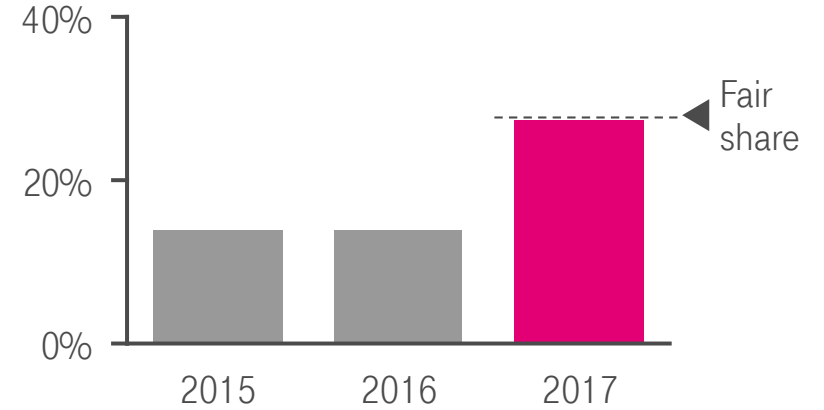
Mobile service revenue development¹,
year-over-year, per half year



¹ Source: DT analysis

...while DT has begun to leverage its quality leadership

Mobile contract net adds back on fair share level,
Mob. contract net adds market share



**BEST
MOBILE NETWORKS**

8 countries "best in P3 test"
(GR, HU, HR, SK, CZ, PL, MK, ME)

SUBSTANTIAL PROGRESS ON CONVERGENCE AND TROUBLED ASSETS

Commercial strength in FMC

Growth in B2C, 2017 vs. 2016

FMC HH	+420 k	+43%
FMC REVENUE	+€300 mn	+81%

Growth in B2B, 2017 vs. 2016

FMCC ACCOUNTS	+60 k	+38%
FMCC REVENUE	+€60 mn	+20%

Churn reduction, 2017 vs. 2016

MOBILE SUBS. CHURN	-1,850 k	-13%
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¹ Fixed-mobile-substitution

Assets strengthened

T-Mobile Austria developed towards convergence

- Proposed acquisition of UPC



Turnaround in critical NatCos

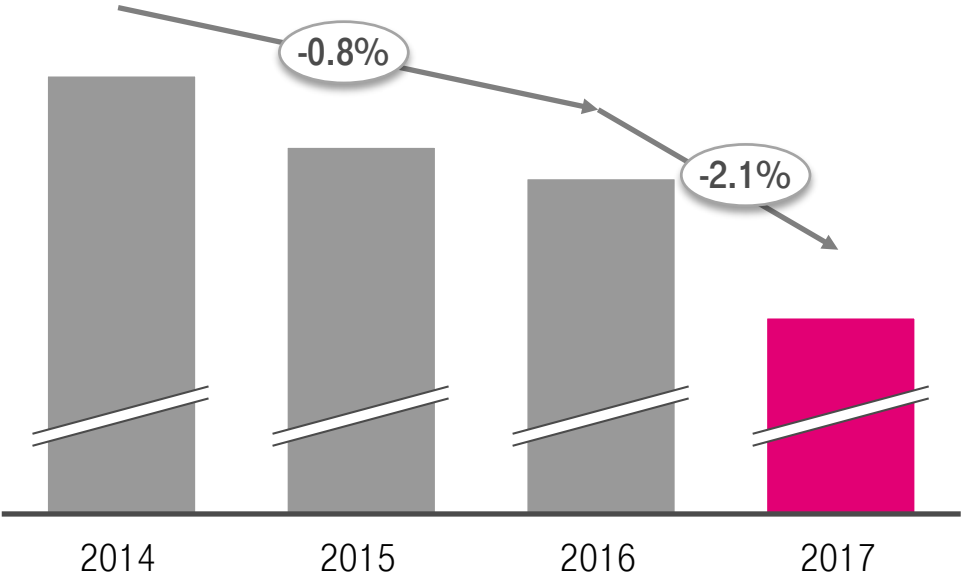
- T-Mobile Poland partnering deal with Orange, FMS¹ launched, and port-in leadership
- Telekom Romania's brand re-positioning



REACCELERATED COST SAVINGS AND MAJOR ORGANIZATIONAL CHANGES IN 2017

Reduction in indirect costs

Indirect cost, organic



Note: Organic development adjusted for regulation and currency effects. ¹ Board of management

People & structural issues improved

C-levels¹ reviewed in NatCos

Changes in last 12 months **≈50%**

EU HQ made leaner & more agile

Smaller organization **-30%**

International experts brought into HQ

New executive position holders **37%**

STRATEGY 2018 – 2021

GROUP STRATEGY

GERMANY

SYSTEMS SOLUTIONS

TECHNOLOGY & INNOVATION

T-MOBILE US

EUROPE

GROUP DEVELOPMENT

FINANCE

EUROPE IS POSITIONED TO CREATE VALUE BY LEADING IN CONVERGENCE, TECHNOLOGY, DIGITALIZATION, AND B2B

Our strategy

GROW

LEAD IN CUSTOMER EXPERIENCE

ONE CONNECTIVITY & PERFECT SERVICE

LEAD IN TECHNOLOGY

INTEGRATED GIGABIT NETWORKS

LEAD IN BUSINESS PRODUCTIVITY

SECURE ICT SOLUTIONS & BIG IOT

SAVE FOR GROWTH INVESTMENTS

SIMPLIFY, DIGITALIZE, ACCELERATE

Ambition Europe



1 LEAD IN CUSTOMER EXPERIENCE/LEAD IN TECHNOLOGY

- **Magenta1:** Drive convergence to enable value creating market structure
- **Broadband/TV:** Own the gigabit position through smartly funded fiber investments
- **Mobile:** Maintain best network and commercial momentum to exploit market growth
- **Leading service:** Differentiate with digital and seamless connectivity, enabled by agile & simplified IT

2 LEAD IN BUSINESS PRODUCTIVITY

Leverage our unique B2B position to drive growth in cloud, IoT, and Smart Cities

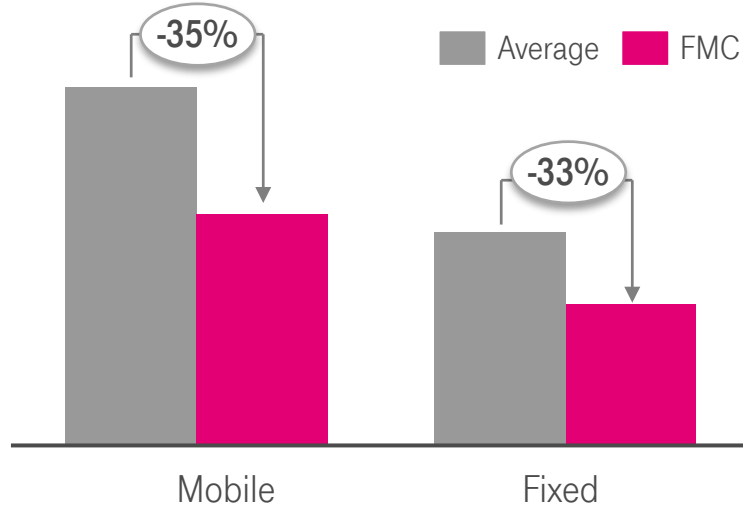
3 VALUE TRANSFORMATION

Efficiency improvement through leveraging digital opportunities and our unique scale

1 CONVERGENCE: COMMERCIAL KPIs EVIDENCE BENEFITS

FMC reduces churn

Example Greece, Q4/17



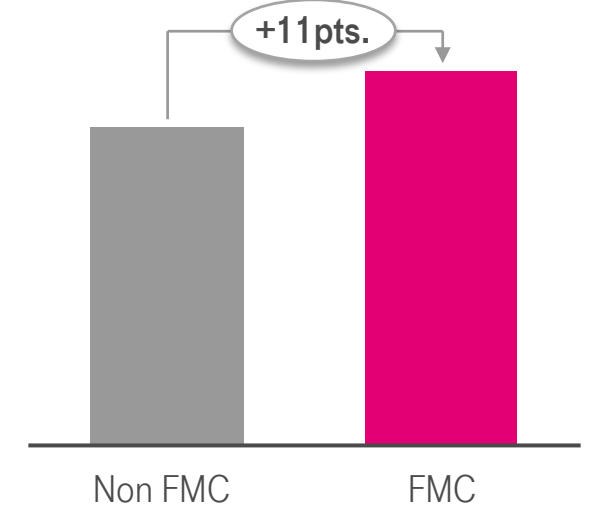
FMC increases incremental ARPHH¹

December 2017



FMC improves TRI*M

Greece, Croatia, Hungary, Slovakia, Q4/17



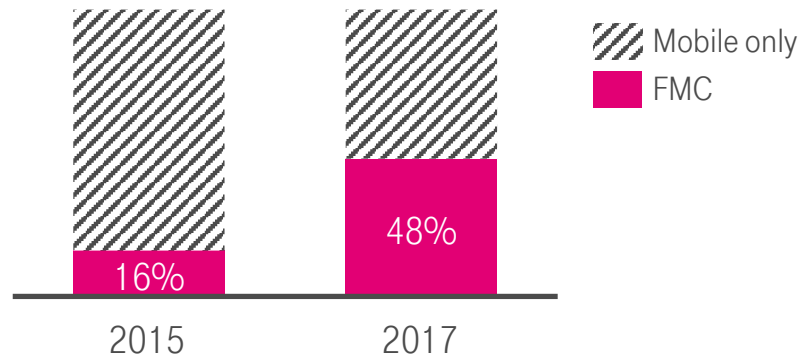
¹ Delta revenue per HH created after migration to FMC

1 CONVERGENCE: REDUCES EXPOSURE TO MARKET VOLATILITY

Focus on commercial execution in FMC: Drive volume and scale up fast – example Slovakia

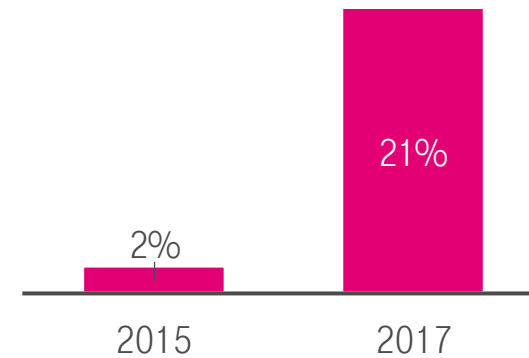


FMC gross add share,
% of total mobile B2C contract sales



Less exposure to market volatility as we leverage Europe's largest fixed base

FMC mobile contract share,
% of total mobile B2C contract base



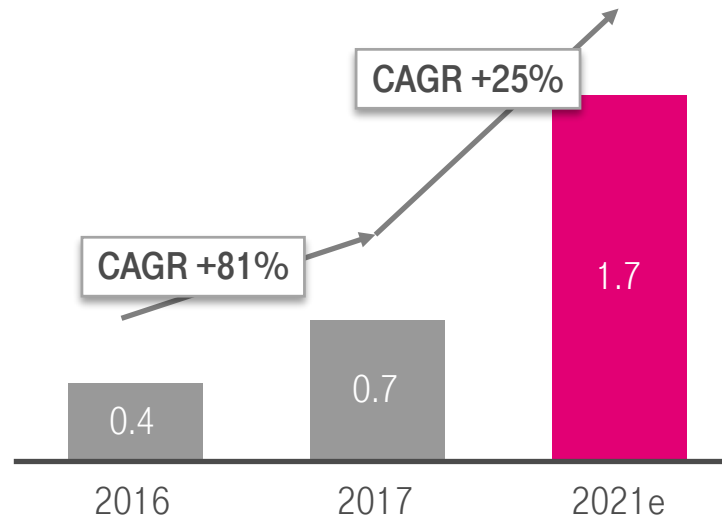
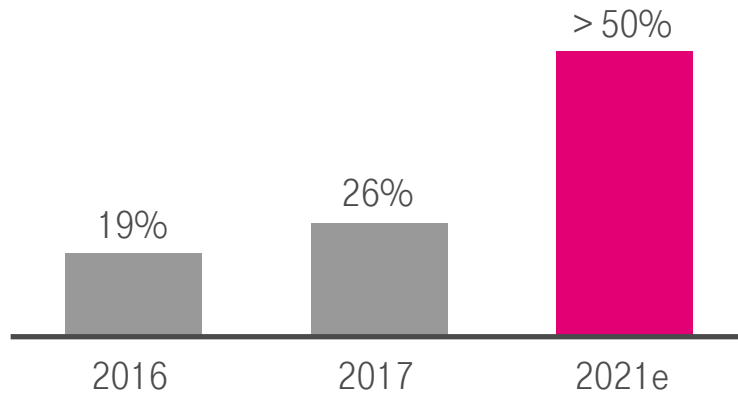
Build a more resilient portfolio with time

1 CONVERGENCE: TARGETING > 50% HOUSEHOLD PENETRATION

Focus on commercial execution in FMC: Drive volume and scale up fast

FMC household penetration
(FMC HHs/fixed broadband base)

FMC revenues,
€ bn



- Simple and flexible FMC offers for all HH, e.g.



Launch of new Magenta1 portfolio with strong more-for-more benefits (double data & full eligibility)

- Go-to-market using analytics/HH datamart, e.g.



Extended HH view leveraging big data and supported by "My Cosmote APP"



End-to-end below-the-line channel to be fully in operation from Q2/2018

Numbers reflect the following NatCos: GR, HU, HR, SK, RO, MK, ME, CZ = currently converged countries

1 NETWORKS: “CONVERGED LEADER” MARKETS WILL LEAD TRANSITION TOWARDS GIGABIT SOCIETIES

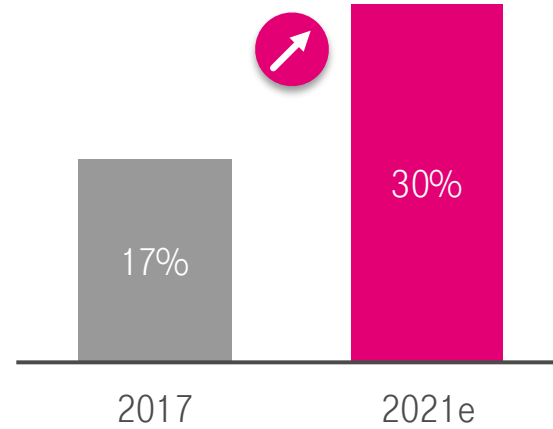
1 Compelling economics & track record

2 Societal benefits

3 Unique leverage



FTTH/B HH coverage^{1,2}



Reinforce leading fixed broadband position and/or address strong competition

¹ Including cable ED3 coverage ² Numbers include the following countries: GR/HU/SK/HR = Converged leaders

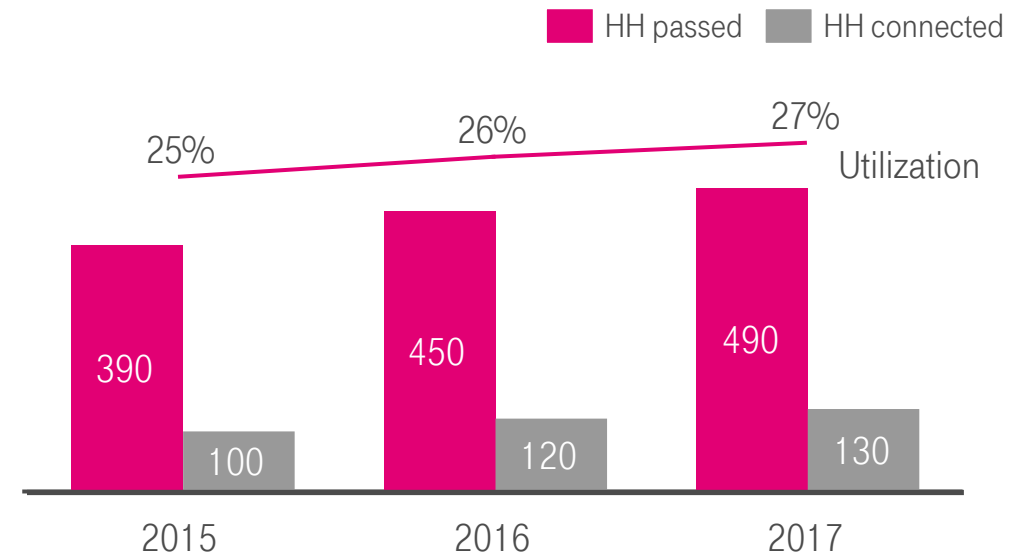
1 NETWORKS: COMPELLING FIBER ECONOMICS IN FOOTPRINT, WITH TRACK RECORD TO MONETIZE

1 Compelling economics and track record

DT EU fiber economics

- < €300 per home passed for 25–50% of footprint
- FTTH ARPU ranges from €20 to €25¹
- 7–12 years payback even in case of copper overbuild

Fiber utilization on profitable level and improving, example Slovakia, k



¹ Based on analysis from Croatia, Hungary, Slovakia

1 NETWORKS: PARTNERING WITH LOCAL GOVERNMENTS

2 Societal benefits

CONNECTING EUROPE BROADBAND FUND



EU has invested €2.5 bn for broadband rollout and connectivity through structural funds from 2007–2013, [...] and in 2014–2020 member states have approved €6 bn.

(Jan Dröge, The European Broadband Competence Offices)

SUPER FAST INTERNET PROGRAM



...worth HUF60–70 bn, e.g., to provide BB Internet access to all educational institutions (≈ HUF13 bn), funded with domestic budget and by EU.

(Tamas Deutsch, Digital Commissioner)

DT'S FIBER ROLLOUT COMMITMENT



This investment is a vote of confidence in the Greek economy and at the same time an important step for its digital transformation.

(Alexis Tsipras, Prime Minister)

3 Unique leverage

Strong synergies with mobile

- Improved economics with FMC: +€9–15 ARPHH increase until 2017
- Synergies in fiber backhaul

Experienced in fiber rollout & monetization

- 1.5 mn HHs passed with fiber in 2016 & 2017, and 0.33 mn HHs connected
- 0.42 mn fixed broadband net adds 2016 & 2017

1 NETWORKS: TAILORED STRATEGIES FOR OUR “CONVERGED CHALLENGER” MARKETS

Strategies for converged challengers

	AUSTRIA 	CZECH 	POLAND 
M&A	Proposed UPC deal 	opportunistic 	opportunistic 
WHOLEBUY		Cetin 	Orange letter of intent 
OWN BUILD			
FWA/FMS¹ (FIXED)			

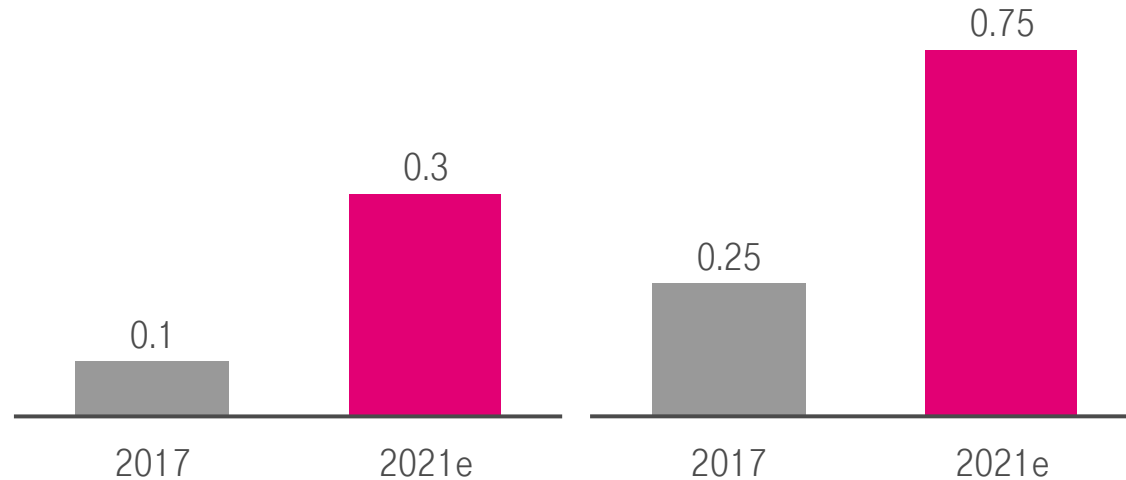
¹ Fixed wireless access/fixed mobile substitution

1 NETWORKS: SMART FUNDING TO TRIPLE FIBER RUN-RATE WITHIN STABLE CAPEX ENVELOPE

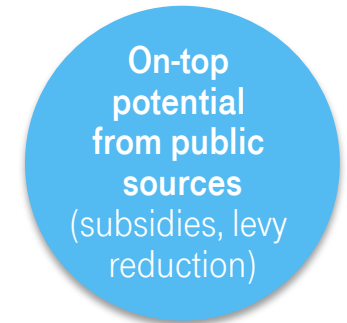
Fundable opportunities

Organic FTTH/B investments¹
run-rate in € bn p.a.

Organic incremental households passed¹
run-rate in mn p.a.



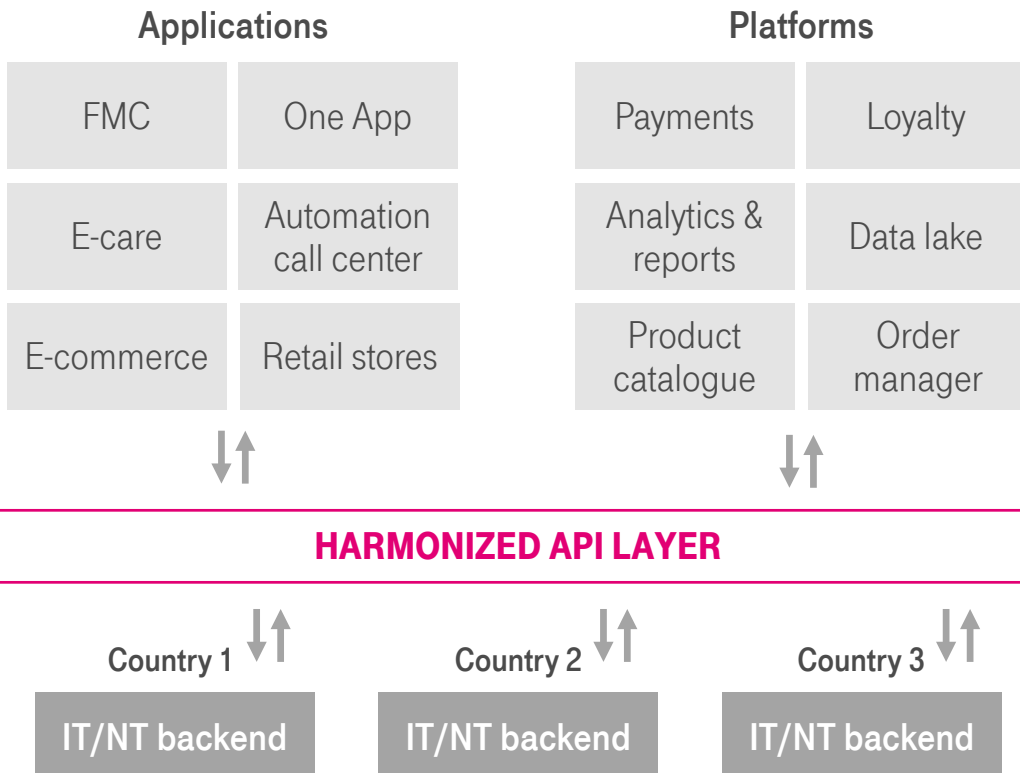
- Reprioritization within fixed
- Mobile Capex optimization (e.g. advanced analytics)
- IT Capex optimization (e.g. agile approach)



¹ FTTH/B and Cable ED3, organic build out in our currently converged countries, excluding Romania (GR, HU, HR, SK, MK, ME, CZ),

1 SERVICE: REINVENTING OPERATIONS WITH SIMPLIFIED & AGILE IT

Moving to harmonized API¹ layer across NatCos



¹ Application programming interface

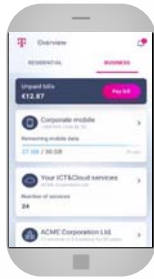
New way of working

- Growing off-shore development capability
- Agile, simplified, open source development reutilizing the harmonized API layer
- Scalable cloud based infrastructure
- Enabler for big data analytics to drive, e.g. customer led fiber rollout

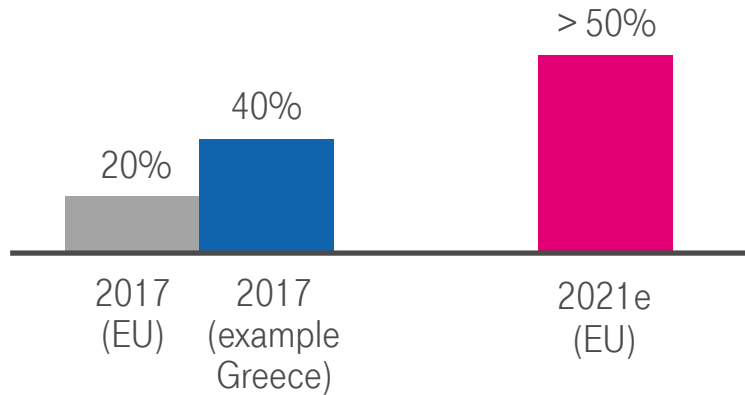
1 SERVICE: CONVERGENCE THROUGH SEAMLESS CONNECTIVITY

Digital at the center

App as focal point for customer interaction



One App penetration



Connected everywhere



Easy to use services, in lean & fast production

- **Seamless connectivity app:**
> 20% of FMC customer base by 2021
- **New homegateway with better Wifi and SmartHome support:**
60–80% of HHs swapped by 2021



European Aviation Network completed!

- **World's first integrated satellite and air-to-ground connectivity network**

1 SERVICE: TARGETING NUMBER 1 OR 2 IN TRI*M IN ALL OUR MARKETS – GREECE IS LEADING THE WAY

Cosmote Greece succeeds in stable #1 position in customer satisfaction TRI*M index



Key customer satisfaction drivers being addressed

Strong BRAND

- “One world better for all” new brand promise

Innovative CUSTOMER CARE

- **UFixit app:** innovative digital care based on devices as interactive service tools with video communication

Digital CHANNELS

- **App** penetration already at 40%

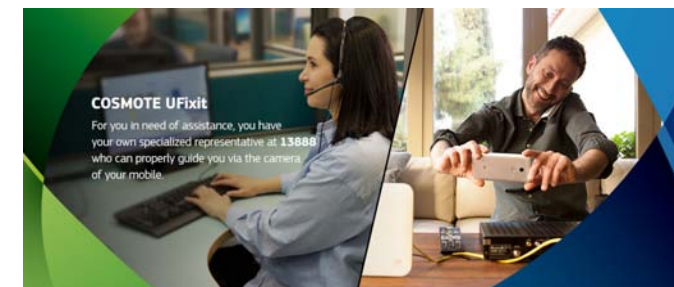
Excellent TECHNICAL SERVICE

- **Technical service transformation:** > 60% of outages automatically detected & dispatched in 2018

Customer centric CULTURE

- **Customer experience training:** > 1,000 managers participating in “one day at first line”; 280 Customer Experience Ambassadors

“ COSMOTE is an active part of Greek society and takes on a bigger role towards the country and the Greeks, by connecting our products and services with a bigger goal. ”



2 B2B: CONVERGENCE AND CLOUD DRIVE GROWTH

B2B: Growth via push of cloud and aggressive increase of 2 & 3 leg penetration

Sales push in VSE and SMB

- Leverage cloud business
- Big Data campaigning & horizontal bundling to drive FMCC
- New go-to-market approach for SMBs

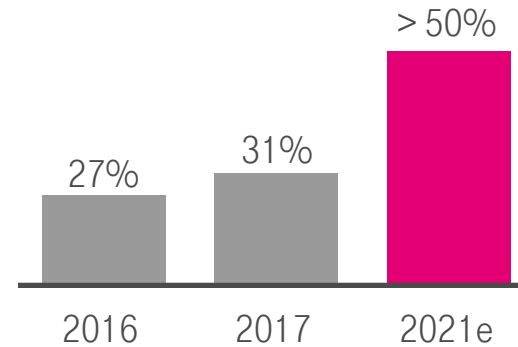


SMB vertical clusters specific bundling, e.g. for retail, hotels, ferries, food service (hotel/restaurant/coffee shop)

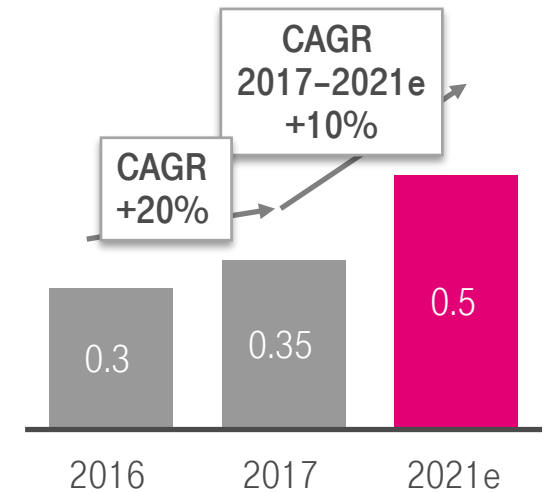


Radically simplified standard portfolio for VSE/SMB, e.g. 3 “un-carrier” rate plans each in mobile & fixed

FMCC penetration¹
(as share of VSE & SMB accounts)



FMCC revenues¹,
€ bn



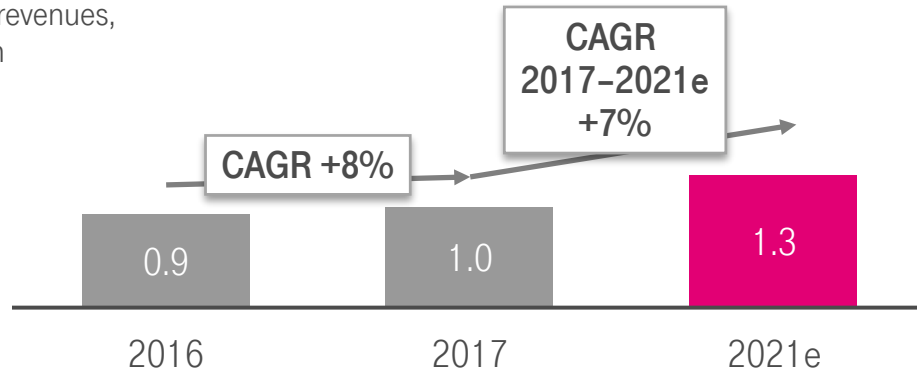
Note: VSE = very small enterprises, SMB = small and medium size businesses. ¹ FMCC: Fixed Mobile Cloud Convergence (B2B Convergence Product)

2 B2B: LEVERAGING ICT STRENGTH FOR SMART CITY / IOT

Leverage position in ICT & further grow cloud

- **Hybrid cloud:** Expansion of “IT as a Service” with Azure services
- **Win with strategic partners** across DT-EU footprint, e.g. Cisco ROSE, SAP, Microsoft (O365)
- **Focus on Verticals**
 - Country digitalization in CZ, HR, MK, ME
 - Finance & Insurance in HU, PL, GR

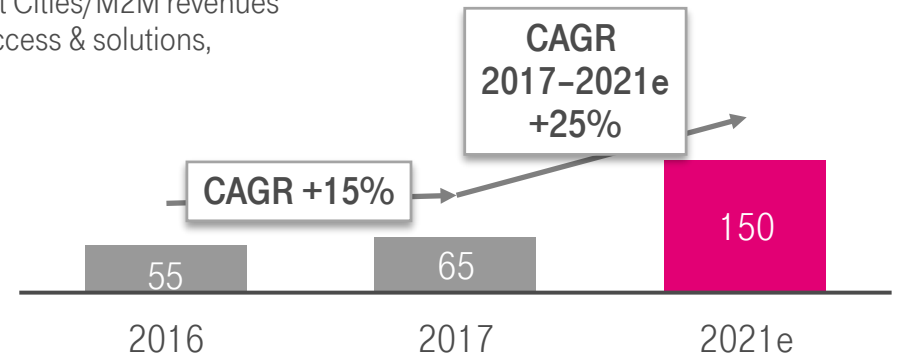
ICT revenues,
€ bn



Push of Smart Cities/IoT portfolio

- **Focus on key city verticals** such as Smart Lighting, Smart Parking, Wifi for public services, Smart Waste Management, electronic vehicles chargers, e.g.:
 - World’s 1st NBloT connected street lights in Patras, GR
 - 1st Smart Street in Dubrovnik, HR

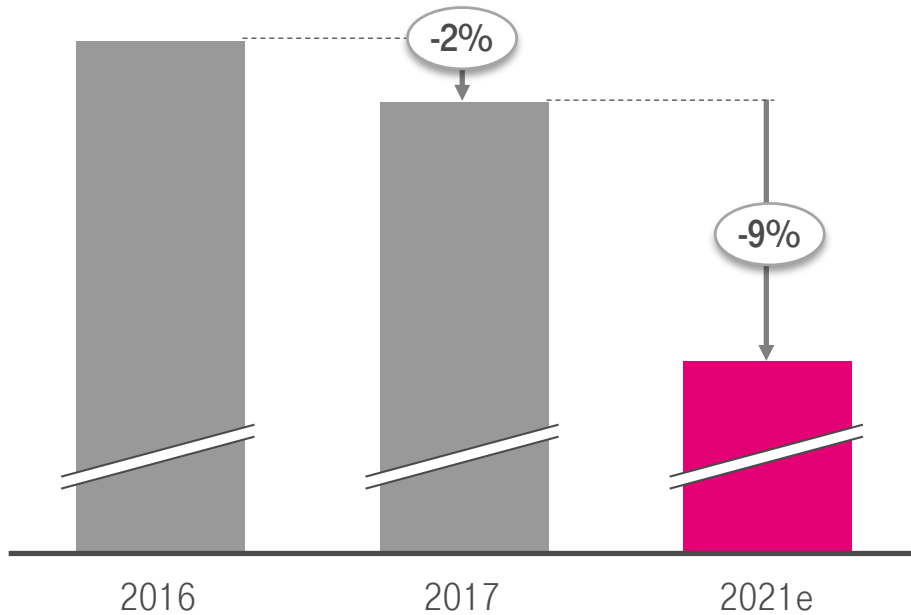
Smart Cities/M2M revenues
IoT access & solutions,
€ mn



3 VALUE TRANSFORMATION: €0.4 BN LOWER INDIRECT COSTS 2021

Short-term value transformation mainly from efficiency in current operating model, digitalization impact in 2019+

Indirect cost, organic



Note: Organic development adjusted for regulation and currency effects.

Operational efficiency, e.g.

- Consolidation and retirement NT & IT
- Back-office elimination

≈ €120 mn

A Simplified operations

- Simplified products
- Simplified IT
- Simplified processes

≈ €50 mn

B Digital customer interaction

- One App, centrally developed
- Radical shift to online sales
- Serving SMBs via FMCC portal

≈ €90 mn

C Future-proof organization

- Leaner structure
- Culture, experts, skills

≈ €100 mn

A RADICAL SIMPLIFICATION IS A KEY ENABLER

Commercial propositions

- Address tariffs, security vulnerability assessment and business rules
- Delineate segment overlaps
- Remove high customer impact rules (eg. closed-user-groups)

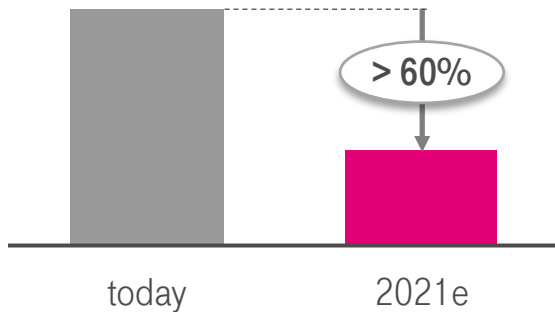
Processes

- Digital first
- Unify delivery model across channels and segments
- Review risk management

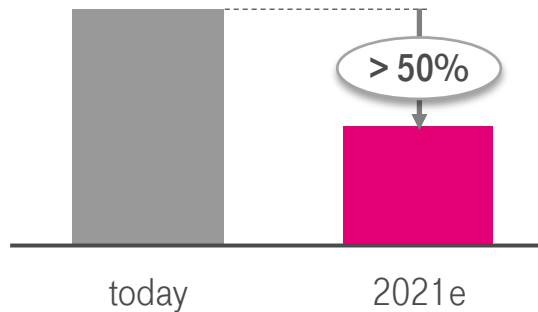
IT/platforms

- De-customize applications
- Simplify user interface
- Simplify architecture
- Decommission applications

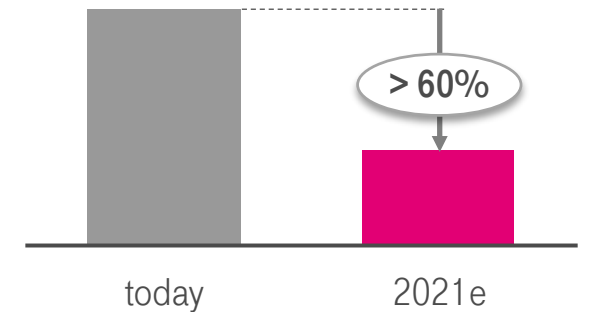
tariffs



process variations



lines of custom CRM code



B SCALING UP CUSTOMER FACING DIGITAL TOUCHPOINTS

B2C: Digital customer self-service

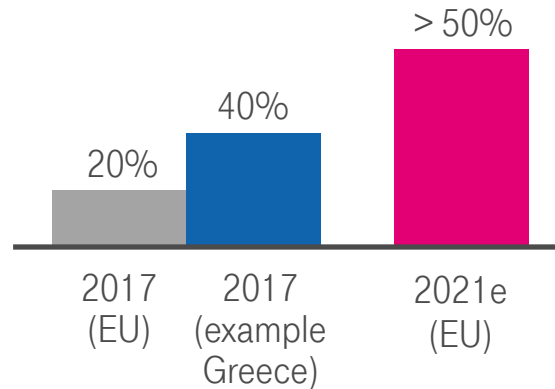
Digitalization of customer interface

- Smartphone service app as direct link to customers
- Centrally developed, with standardized API

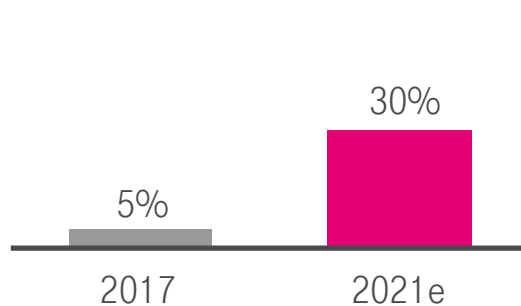
Upscaling of E-Commerce

- Customer contact digital end-to-end with zero-touch self-service
- Intuitive self-administration

One App penetration



Pure online sales share



B2B: Digitalization partner for SMBs

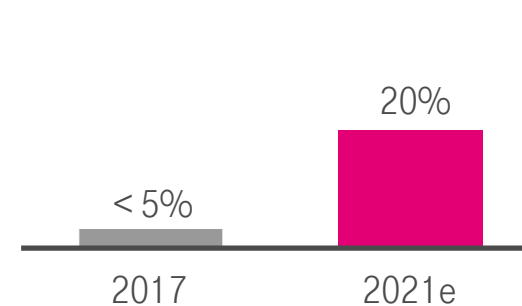
One digital cockpit “FMCC* Portal”

- Easy-to-use customer touchpoint for all Telco and ICT services

Upscaling of cloud services

- Sales initiatives pushing XaaS, e.g. Office 365

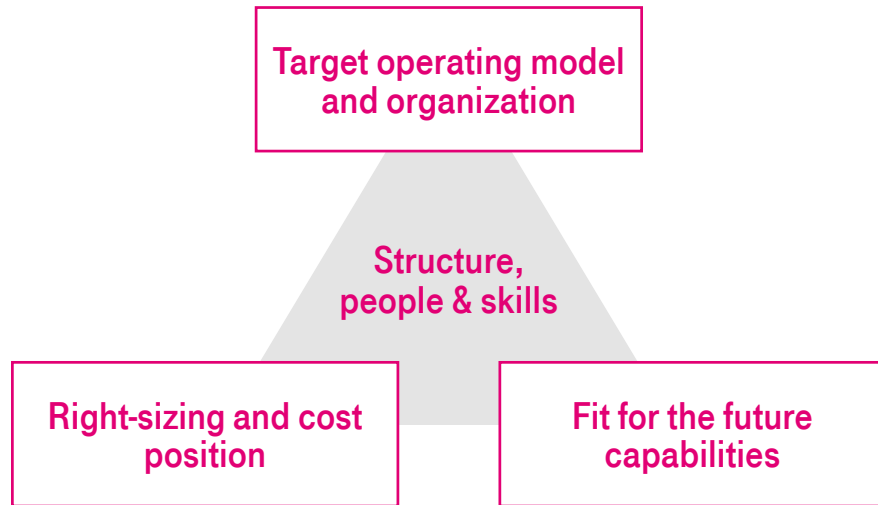
FMCC portal share @ SMBs



OPPORTUNITY FOR CROSS BORDER SYNERGIES

Establish an organization with the right structure, people & skills

Future-proof organization

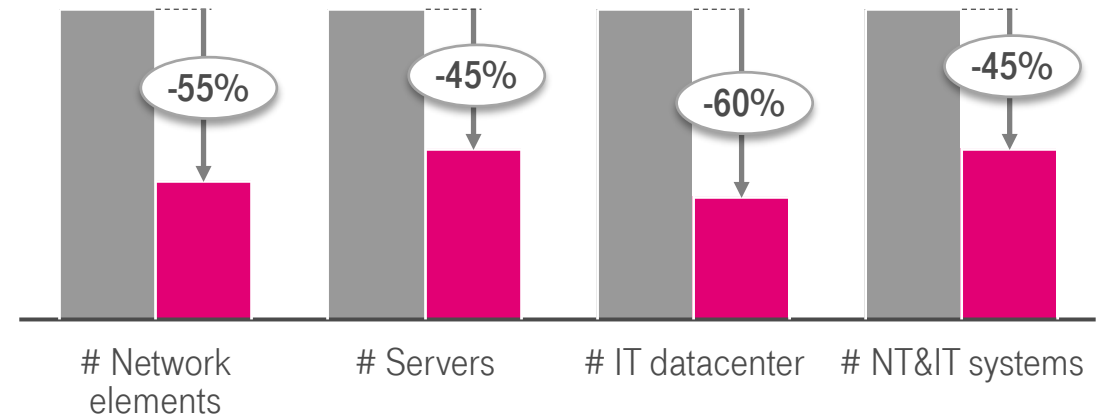


Learn from CZ and SK merger



Ind. cost savings 2021 vs. 2017 \approx €50 mn

Technology transformation element is €30-35 mn



FINANCIAL OUTLOOK

GROUP STRATEGY

GERMANY

SYSTEMS SOLUTIONS

TECHNOLOGY & INNOVATION

T-MOBILE US

EUROPE

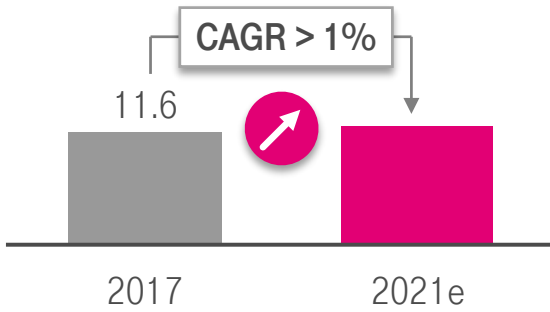
GROUP DEVELOPMENT

FINANCE

FINANCIAL OUTLOOK

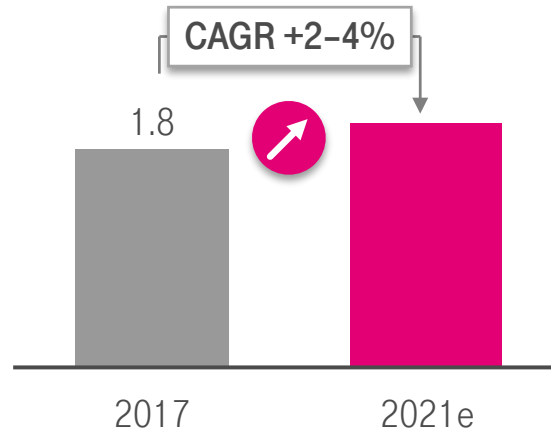
Revenue growth¹

€ bn



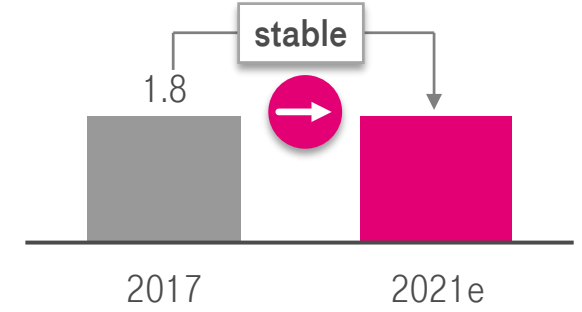
Cash Contribution²

€ bn



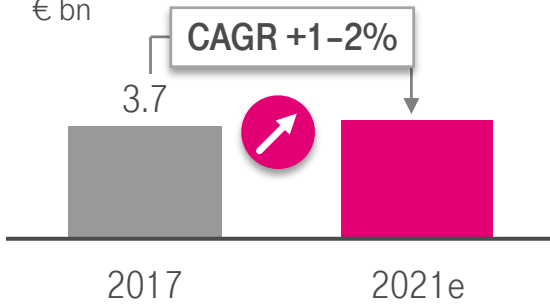
Cash Capex

€ bn



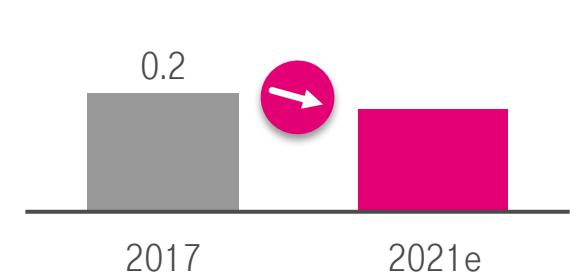
Adj. EBITDA

€ bn



Special factors (Cash)

€ bn



¹ Without EU roaming impact ² Cash Contribution = Adj. EBITDA - Cash Capex - Special factors (Cash)

MID TERM AMBITION LEVEL

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FINANCE

MID TERM AMBITION LEVEL

	Mid term ambition level	Year
B2C GROWTH DRIVERS	<ul style="list-style-type: none"> +25% CAGR FMC revenue (€1.7 bn 2021) > 50% One-App-penetration, 30% pure online sales share Lead in TRI*M: #1/#2 in all markets 	2017-2021e 2021e 2021e
B2B GROWTH DRIVERS	<ul style="list-style-type: none"> +10% CAGR FMCC revenue (€0.5 bn 2021) 20% FMCC portal share +7% CAGR B2B/ICT revenue (€1.3 bn 2021) 	2017-2021e 2021e 2017-2021e
PROFITABLE MID-TERM GROWTH	<ul style="list-style-type: none"> Revenue growth > 1% CAGR EBITDA growth +1-2% CAGR Indirect cost reduction by €0.4 bn Cash Contribution¹ +2-4% CAGR 	2017-2021e 2017-2021e 2017-2021e 2017-2021e

¹ Cash Contribution = Adj. EBITDA - Cash Capex - Special factors (Cash)