TAG Capital Markets Day

Brandenburg an der Havel,12 June 2018

GROWING CASHFLOWS

TAG
Immobilien AG

TAG CMD 2018 TEAM

Claudia Hoyer
COO

Martin Thiel
CFO

Dr. Harboe Vaagt
CLO

Marcus Nudow
LIM Berlin

Dominique Mann
Head of IR/PR

Prof. Dr. Tobias Just
International Real Estate Business School,
University of Regensburg

TAG CMD 2018 Agenda I

10:00
–
12:30

Presentations

Martin Thiel (CFO)

- Opening remarks and overview of TAG's Brandenburg portfolio

Claudia Hoyer (COO)

- Berlin region: acquisition and capex strategy exemplified by TAG's Brandenburg portfolio

Marcus Nudow (Head of Real Estate Management, Berlin)

- Brandenburg an der Havel: integration of newly acquired properties into TAG's portfolio

Claudia Hoyer (COO)

- Service business and future projects @ TAG

Prof. Dr. Tobias Just (University of Regensburg)

- Berlin region: even better than the Capital?

TAG CMD 2018 Agenda II

12:30 – 15:30	**Property Tour**

Property Tour

- **District Hohenstücken** **(943 units)**
  - Rosa- Luxemburg- Allee (799 units)
- **District Görden** **(1,125 units)**
  - Gördenallee (303 units)
  - Haydnstraße (754 units)
  - Beethovenstraße (18 units & TAG office) TAG wohnen
- **District Nord** **(319 units)**
  - Bergstraße (49 units)

15:00 – 16:00

Late Lunch at restaurant WERFT

Transfer to Brandenburg main station/ airport Berlin-Tegel

RECENT PRESS RELEASE

TAG RECENT PRESS RELEASE

Private Placement of corporate bonds

2018/2023
2018/2025

of
EUR 250m

Volume:	EUR 125m
Maturity:	5 years until 19 Jun-2023
Coupon:	1.250% p.a.
Issue price:	99.395%
Status:	senior, unsecured

Volume:	EUR 125m
Maturity:	7 years until 19 Jun-2025
Coupon:	1.750% p.a.
Issue price:	99.615%
Status:	senior, unsecured

- Proceeds used for repurchase of outstanding 2014/2020 bond
- General corporate purposes
- Refinancing of short term bank loans

Repurchase of corporate bond

2014/2020

Volume:	EUR 125m
Maturity:	6 years until 25 Jun-2020
Coupon:	3.750% p.a.
Issuer price:	100%
Status:	senior, unsecured

PRESENTATIONS

GROWING CASHFLOWS

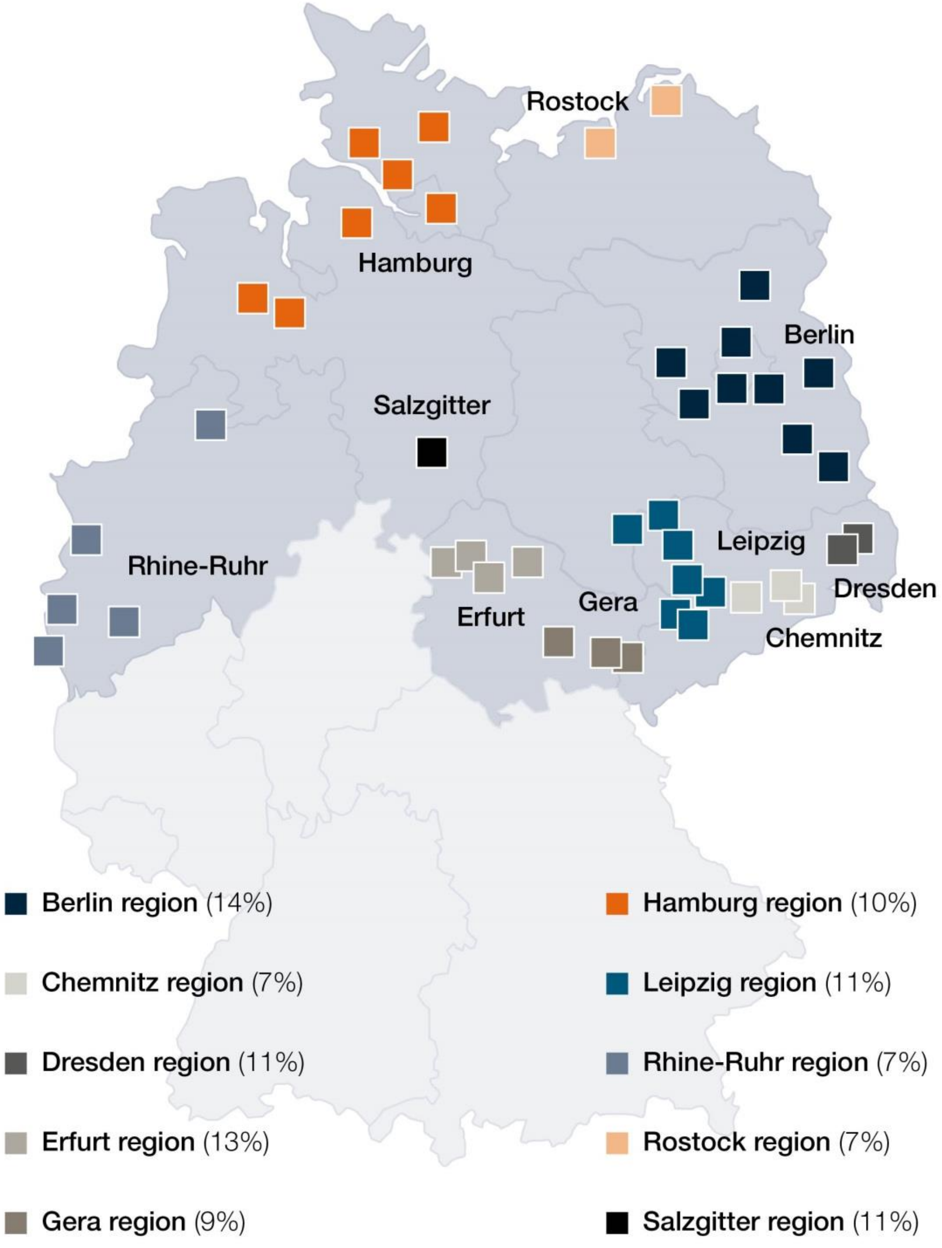
TAG Immobilien AG

Opening remarks and overview of TAG's Brandenburg portfolio

GROWING CASHFLOWS

TAG Immobilien AG

TAG portfolio in total as of 31 Mar-2018



% acc.: proportional IFRS book value real estate volume

Portfolio as of	31 Mar-2018	31 Dec-2017
Units	82,784	83,140
Rentable area in sqm	5,031,307	5,054,778
Real estate volume in EURm	4,274.1	4,275.4
Annualised current net rent in EURm (total portfolio)	301.9	303.3
Current net rent in EUR/sqm / month (total portfolio)	5.32	5.31
Current net rent in EUR/sqm month (residential units)	5.19	5.20
Vacancy in % (total portfolio)	5.9	5.8
Vacancy in % (residential units)	5.6	4.8
L-f-l rental growth in % (Y-o-Y)	2.0	2.0
L-f-l rental growth in % (including vacancy reduction, Y-o-Y)	2.6	3.1

TAG portfolio details by region

Region	Units #	Rentable area sqm	IFRS BV EURm Mar-2018	In-place yield	Vacancy Mar-2018	Vacancy Dec-2017	Current net rent EUR/ sqm/ month	Re-letting rent EUR/ sqm/ month	L-f-l rental growth Y-o-Y	L-f-l rental growth Y-o-Y incl. vacancy reduction	Mainte-nance EUR/sqm Q1 2018	Capex EUR/sqm Q1 2018
Berlin	10,233	583.282	601.0	6.0%	5.9%	4.9%	5.51	6.06	3.6%	3.6%	1.69	2.95
Chemnitz	7,660	443.217	293.8	7.7%	11.0%	9.7%	4.81	4.86	0.7%	3.2%	1.33	8.26
Dresden	6,333	411.119	437.7	6.1%	2.9%	3.1%	5.53	5.77	2.6%	3.6%	1.16	1.08
Erfurt	10,531	592.239	534.1	6.5%	3.7%	1.7%	5.07	5.59	1.4%	1.5%	1.14	1.67
Gera	9,757	568.038	395.6	7.7%	8.9%	8.6%	4.88	5.32	1.9%	2.7%	1.50	3.85
Hamburg	7,130	437.968	427.2	6.5%	4.0%	4.0%	5.46	5.80	1.9%	1.8%	3.06	1.24
Leipzig	10,279	611.586	471.3	7.5%	4.6%	3.6%	5.03	5.43	1.4%	1.6%	1.54	1.07
Rhine-Ruhr	4,700	299.499	283.7	6.4%	4.2%	2.9%	5.27	5.61	1.2%	0.7%	3.97	1.80
Rostock	5,613	335.955	292.6	7.1%	3.7%	3.2%	5.34	5.61	1.4%	2.6%	1.40	3.00
Salzgitter	9,177	563.077	450.4	7.3%	5.5%	5.2%	5.15	5.45	2.6%	3.9%	1.88	2.10
Total residential units	**81,413**	**4.845.979**	**4,187.4**	**6.8%**	**5.6%**	**4.8%**	**5.19**	**5.56**	**2.0%**	**2.6%**	**1.77**	**2.67**
Commercial units within resi. portfolio	1,195	152,984	---	---	17.2%	17.6%	7.84	---	---	---	--	--
Total residential portfolio	**82,608**	**4,998,963**	**4,187.4**	**7.1%**	**5.9%**	**5.8%**	**5.26**	**---**	**---**	**---**	**1.72**	**2.59**
Other	176	32,343	86.7	5.6%	6.0%	9.9%	13.35	---		---	2.0	1.22
Grand total	**82,784**	**5,031,307**	**4,274.1**	**7.0%**	**5.9%**	**5.8%**	**5.32**	**---**	**---**	**---**	**1.72**	**2.58**

TAG Berlin region - overview

	31 Mar-2018
Units Berlin region	8,743
Acquisitions Berlin region 2017	1,490
Units Berlin region total	**10,233**
Vacancy	5.9%
Current net rent EUR/sqm	5.51
Rental growth basis l-f-l (Y-o-Y)	3.6%
Rental growth l-f-l incl. vacancy reduction (Y-o-Y)	3.6%

- TAG operates 6 tenant offices in the Berlin region
- 28 asset and property manager, 49 facility manager (caretaker- cleaning services and gardening) and 5 craftsmen are employed in this region

TAG Berlin region – Top 5 locations

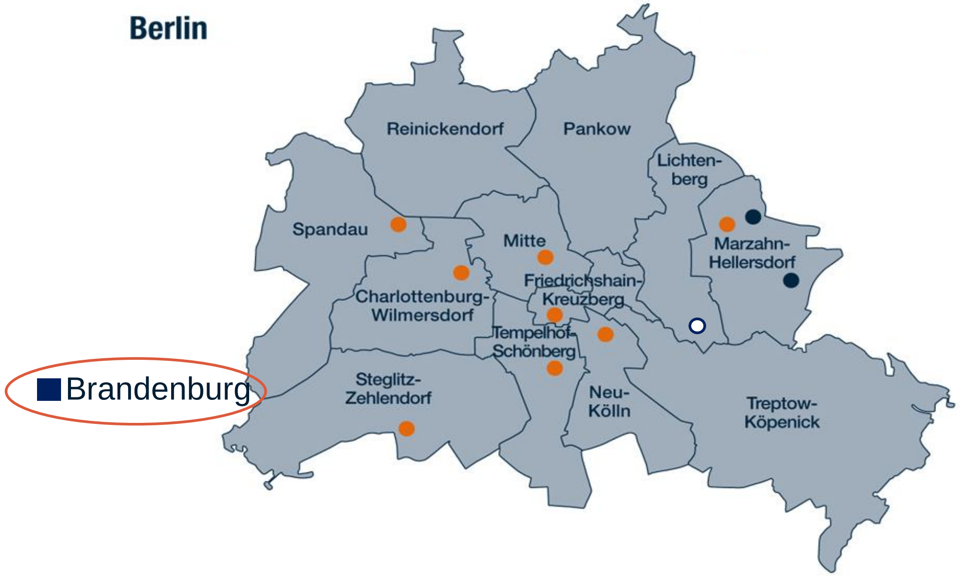
Cities Q1 2018	Resi-dential Units	Rentable area sqm	IFRS BV EURm	In-place yield % Mar-2018	Vacancy Mar-2018 %	Current net rent EUR/ sqm	Re-letting rent EUR/ sqm	L-f-l rental growth y-o-y %	L-f-l rental growth y-o-y incl. vacancy reduction %
Brandenburg an der Havel	2,864	151,084	103,008	7.5%	16.3%	5.09	5.62	6.8%	7.1%
Nauen	1,674	92,118	103,670	6.0%	1.6%	5.72	6.84	1.5%	1.2%
Strausberg	1,175	69,132	68,164	6.8%	0.9%	5.60	6.40	7.1%	6.9%
Bestensee	1,127	68,199	75,115	5.9%	2.4%	5.57	6.39	2.7%	3.1%
Eberswalde	1,062	59,405	45,948	7.2%	4.2%	4.86	5.11	4.6%	4.0%
Other	2,331	143,344	205,143	4.9%	2.4%	5.95	6.63	2.3%	2.3%
Total residential	**10,233**	**583,282**	**601,048**	**6.0%**	**5.9%**	**5.51**	**6.06**	**3.6%**	**3.6%**

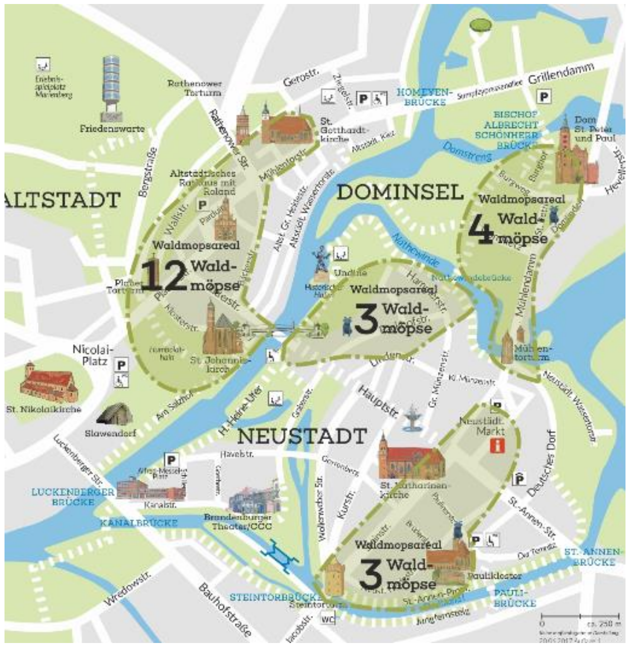
Brandenburg

Nauen

Eberswalde

TAG Brandenburg a.d.H. – overview

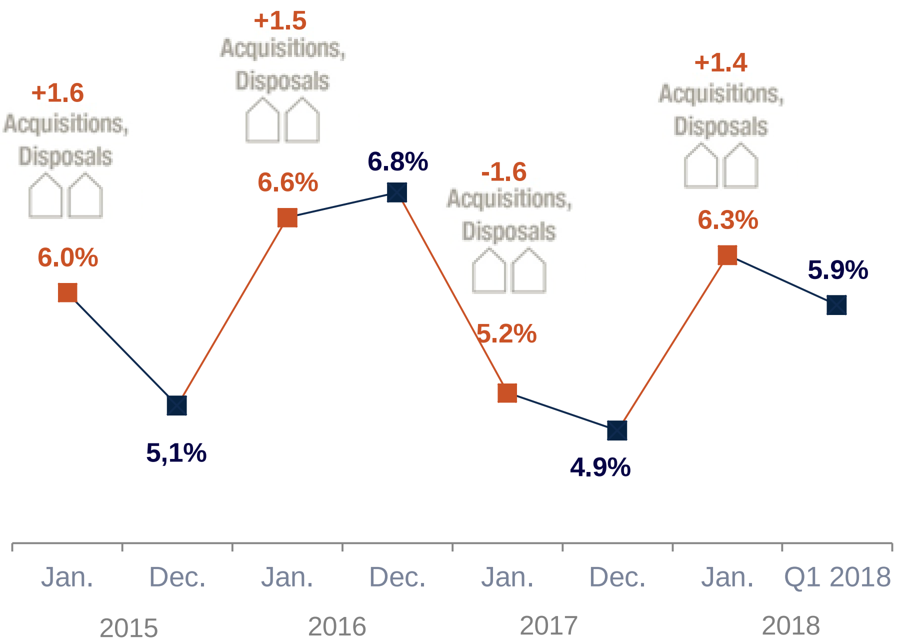




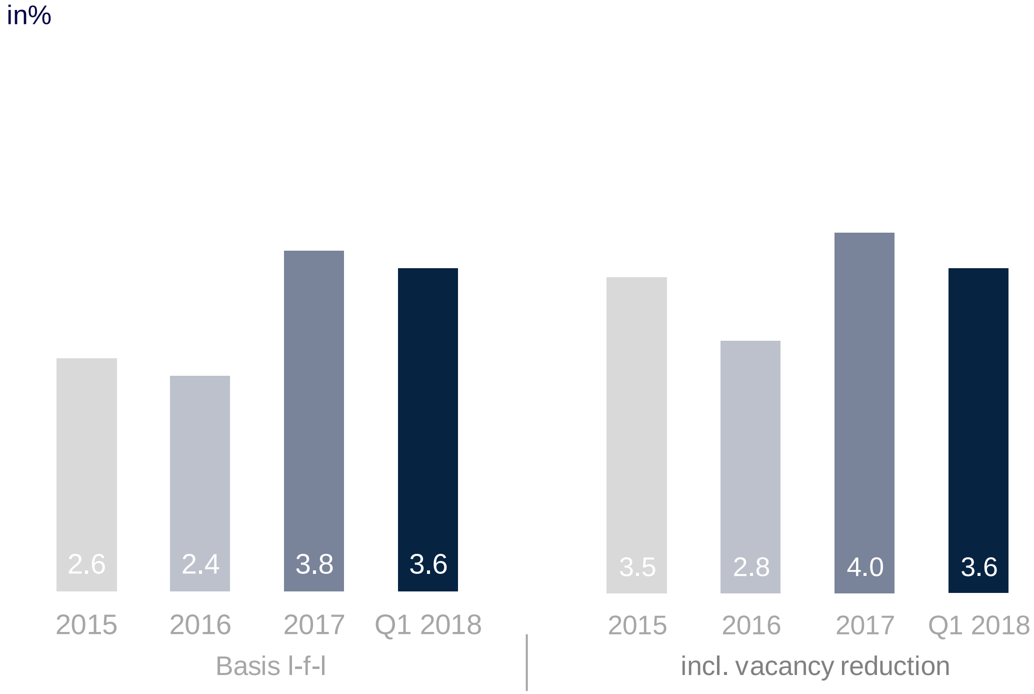
- Brandenburg an der Havel, a distinctly urban town with various restaurants, cafés and its own theatre
- Top employers in Brandenburg an der Havel are globally active companies in the automotive and manufacturing industry (*ZF Getriebegewerke BRB, BES Brandenburger Elektro- Stahlwerk)*
- Inhabitants: c. 72,000 (31 Dec-2017)
- Net migration 2015: c. 1,000 persons
- c. 3,000 students
  - TU Brandenburg: Universitiy of applied Sciences
  - MH Brandenburg: University of Medicine
- Unemployment rate (April 2018): 8.9%
- Development of number of household: + 2.5% Δ 2015/16-2016/17

TAG Berlin region – development since 2015

Vacancy reduction



Rental growth



Q&A

Berlin region: acquisition and capex strategy exemplified by TAG‘s Brandenburg portfolio

GROWING CASHFLOWS

TAG Immobilien AG

TAG acquisition principles

ACCRETION

- NAV/s & FFO/s accretive purchases only
  - Rigorous pricing discipline
  - Purchase yields should not be significantly below average portfolio gross yields (currently at 7.0%)

GEOGRAPHIES

- Focus on portfolios in existing TAG locations/ regions
  - Low marginal costs for asset and property management
  - Detailed market knowledge

TYPICAL DEAL SIZE AND CHARACTERISTICS

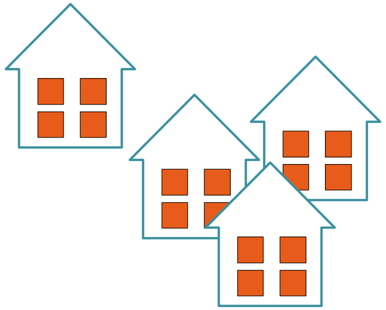
- < EUR 20m in single regions – too big for retail investors, too small for family offices, below the radar of our peer group
- < EUR 50m in multiple regions
- Portfolio needs to be in existing TAG locations, resulting in asset and property management available at lowest marginal costs
- Pure residential
- No development projects

TAG acquisition process

Offer documentation & database

– > 800 offers with a volume of over EUR 10.0bn

– approx. 140,000 residential units, c. 3,000 commercial units



More competition

- Not just in A locations but more and more in B and C locations
- Focus on dispersed and smaller portfolios
- Transactions more complex
- Opportunities from active structuring of complex acquisition processes

Gotha

Brandenburg an der Havel

TAG Brandenburg portfolio – acquisitions

	Acquisition Other 2015	Acquisition "Havel" Nov-2015	Acquisition "Bavaria" Feb-2017	Disposal "Havel" Feb-2017	Net total at acquisition date
Units (residential &commercial)	216	1,776	1,441	535	**2,898**
Current net rent EUR/sqm/month	5.09	4.30	4.77	3.61	**4.74**
Vacancy at date of signing	5.4%	18.6%	19.3%	33.4%	**15.7%**
Purchase/ Selling price in EURm	11.0	41.5	41.9	5.5	**88.9**
Current net rent in EURm p.a.	1.0	4.1	3.4	0.96	**7.5**
Closing	—	Dec-2015	Jun-2017	Jun-2017	—
Multiples	11.0x	10.1x	12.3x	5.7x	**11.2x**
					

TAG Brandenburg portfolio – business plan "Bavaria"

	Year 1	Year 5	Delta p.a.
Units	1,441	1,441	—
sqm	73,208	73,208	—
Rental growth basis l-f-l p.a.	1.0%	1.0%	1.0%
Vacancy	16.0%	6.0%	- 2.0%
Investment per sqm	12.09 EUR	12.36 EUR	0.4%
Impairment losses on rent receivables	2.0%	1.8%	—
Other rental expenses growth p.a.[1)]	1.0%	1.0%	1.0%
Additional employees	2.0	2.0	—
G&A growth p.a.	0.0%	0.0%	—
LTV	69%	—	—
Interest expenses	2.2%	—	—
Cash Flow yield Cash flow = FFO less capex (w/o larger modernisation measures)	**9.9%**	**15.1%**	

[1)] Non recoverable charges, operating cost of vacant real estate, letting costs etc.

TAG Brandenburg portfolio – development

	Total at date of property management takeover	**Total May-2018**
Units (residential and commercial)	2,898	2,898
Current net rent EUR/sqm	4.74	5.12
Current net rent p.a. in EUR Mio.	7.2	8.1
Reletting rent in EUR/sqm	—	5.00 - 7.62
Vacancy	18.0%	15.0%
Vacancy w/o development portfolio	15.7%	10.4%
Rental growth basis l-f-l since date of property management takeover	—	7.8%
Rental growth incl. vacancy reduction since date of property management takeover	—	12.4%

TAG capex strategy

Local market development | Customer requirements | Competitive envt.

Regional particularities | Condition of the property

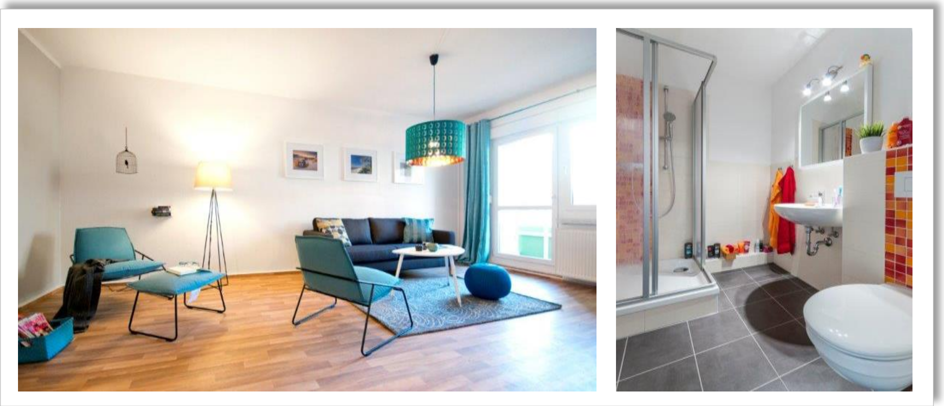
Selection of properties

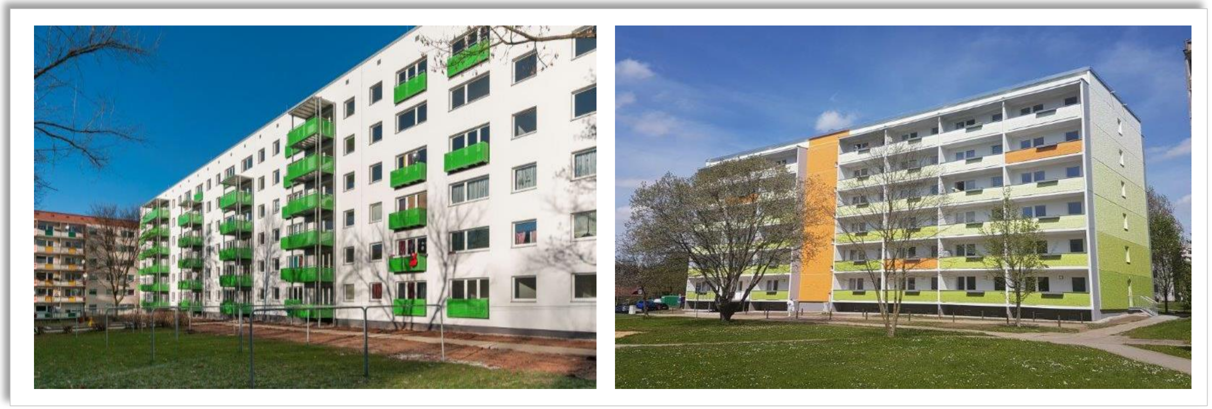
Modernization and utilisation concept incl. return calculation

Construction Committee | Construction Committee

Detailed concept and tendering

Implemen-tation





TAG capex strategy

Modernisation during reletting/ maintenance

Painting staircase

Bath instruments

Letter boxes

Modernisation of vacant flats

Total return **40%-50%**

Large modernisation measures

Total return **8%-13%**

➡ In the event of a portfolio takeover: immediate measures for fire protection, tenant safety, etc.

Q&A

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TAG

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Integration of newly acquired properties into TAG's portfolio

Brandenburg an der Havel

General process of portfolio handover

Purchase/ notarisation

Intensive coordination with seller

- **Introduce standardized procedures and processes**
- **Tenant data in TAG ERP system**
- **Uniform tenant correspondence**

Welcome the tenants

Regional staff recruitment

Opening tenant office

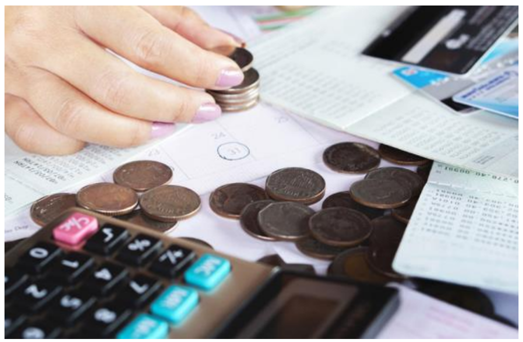
First operational steps

Portfolio analysis

Maintenance condition/ backlock

Rental concept

Tenant structure



Receivable management

Services

Impression from an eviction apartment

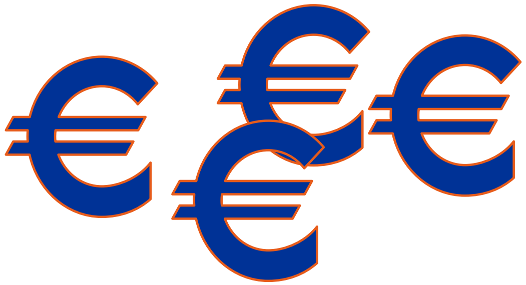
Further steps in developing the portfolio

Establish/ expand network at the location

Marketing/ PR measures: “ball special”

Establish a dedicated team

Review and adjustment of rents & rent increases



Portfolio development

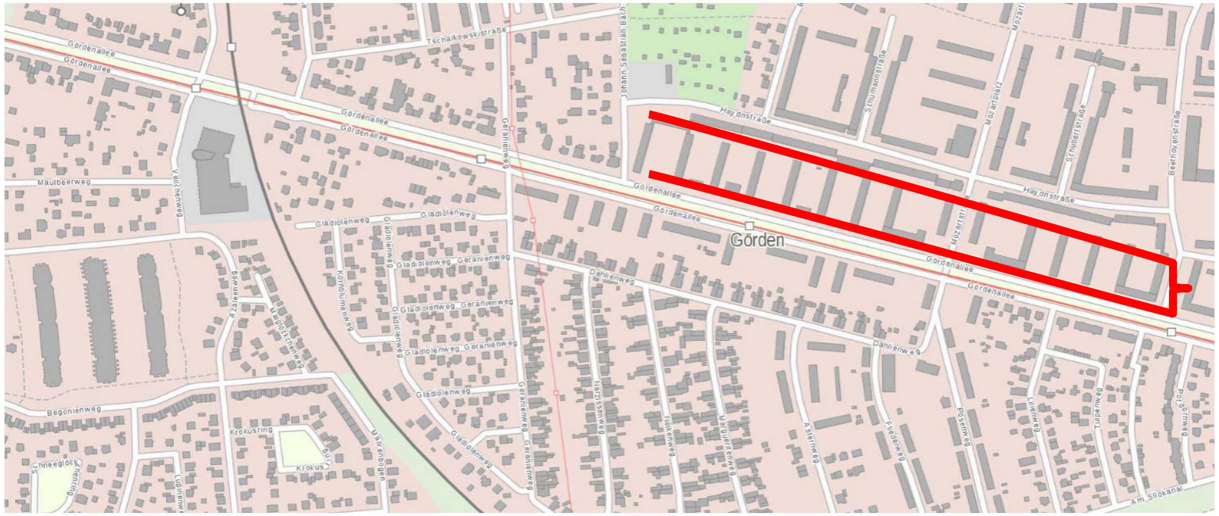
Portfolio	Brandenburg other	“Havel”	“Bavaria”
Date of property management takeover	2015	Dec-2015	Jun-2017
Residential units[1)] at date of property management takeover	183	938	1,440
Quality	new construction 1994 – 1996	un-/ partly-/ refurbished	partly refurbished
Vacancy[1)] at date of property management takeover	5.1%	8.4%	22.2%
Vacancy[1)] May-2018	1.1%	5.7%	14.3%

1) w/o commercial units and development portfolio; total units Brandenburg portfolio May 2018: 2.898 units

Portfolio refurbishment in the Görden district

303 residential units along Gördenallee

- More than 200 units vacant
- Most heated by oven, in-wall, gas heaters
- All units were small 1- & 2-room apartments
- No balconies / terraces



Portfolio refurbishment in the Görden district

Creation of a show building at Gördenallee 168 in summer 2018 with four different floor plans:

	Size	Target rent/sqm/month
1-room apartment with large dine-in kitchen	ca. 34 m²	8.00 €
2-room apartment with balcony	ca. 49 m²	7.50 €
2-room apartment with balcony	ca. 63 m²	7.00 €
4-room maisonette apartment with terrace	ca. 100 m²	6.75 €

Phases of the refurbishment in the Görden district

- market survey to gauge what types of housing people want
- modern floor plans
- balconies or terraces
- dine-in kitchens with windows
- refurbished daylight baths

Implementation of the 1st construction phase Gördenallee 164-174/ Beethovenstr. 2-6: expected completion by end of 2019

Portfolio refurbishment in the Görden district

Attractive cashflow returns

Return on investment of c. 10–13 %

- Strengthen the "old Görden" quarter
- Day-care, schools & public facilities in the immediate vicinity
- Excellent connection to public transport
- Close to water: Gördensee, Silokanal
- Attractive living conditions for all generations

Q&A

Service business and future projects @ TAG

GROWING CASHFLOWS

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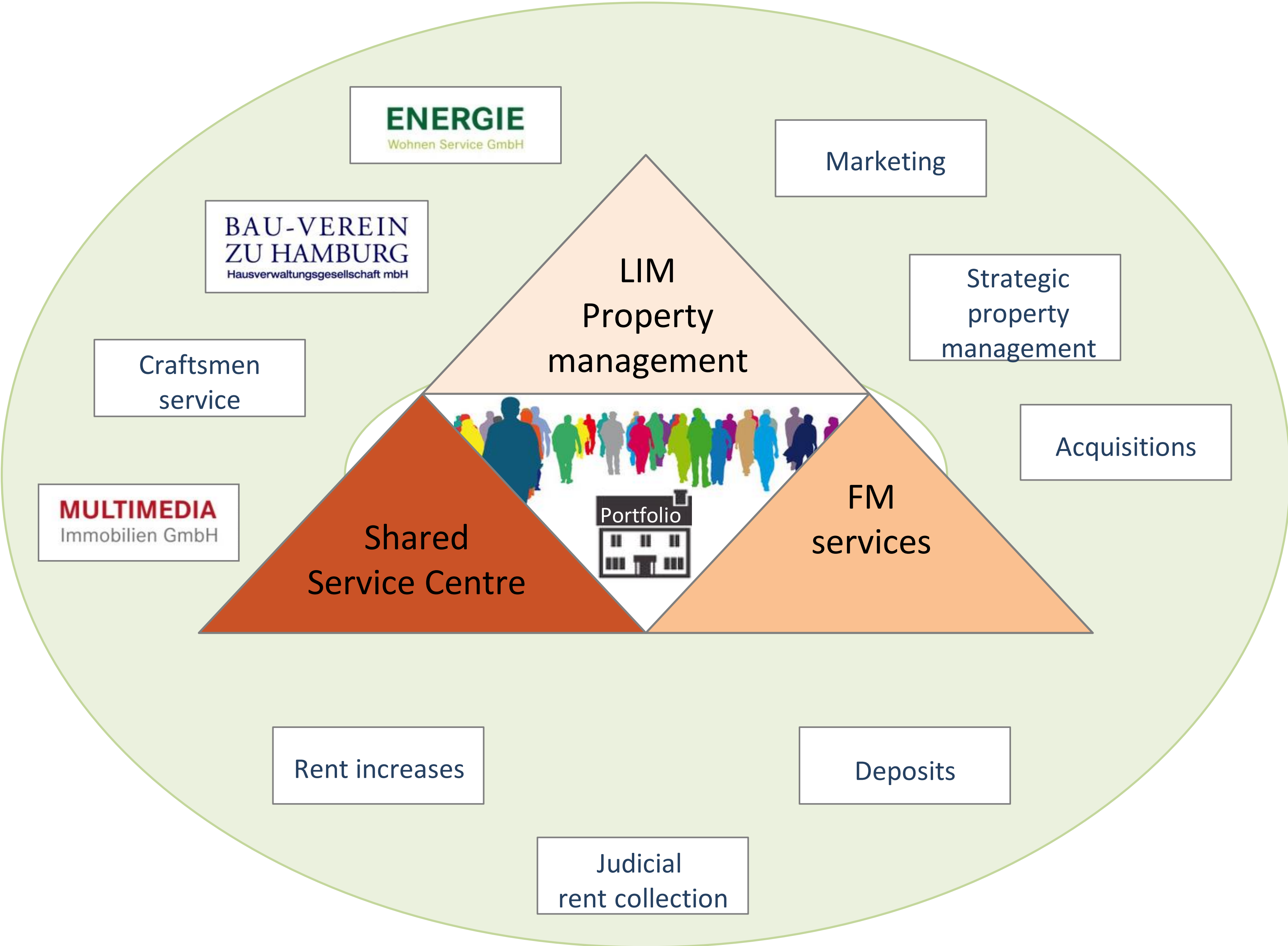
TAG our management concept



TAG services business

Facility management (100% owned subsidiary)

TAG Immobilien Service GmbH

- Caretaker services, cleaning services and gardening
- In place since 2012
- Main target: improve quality in comparison to external services

	2016	2017	2018E
Revenues (EURm)	6.5	9.2	9.5
No. of employees	222	309	308
FFO impact (EURm)	0.3	0.4	0.5

c. 46,000 units covered in 2017
c. 60,000-65,000 units as long-term goal (c. 75% of total portfolio)

Craftsmen services (100% owned subsidiary)

TAG Handwerker-service GmbH

- Modernisation of apartments (vacant flats and during re-letting process)
- In place since 2015
- Main target: quick availability of craftsmen in regions with frequent bottlenecks regarding external modernisation services

	2016	2017	2018E
Revenues (EURm)	1.6	2.6	4.5
No. of employees	29	56	69
FFO impact (EURm)	0.0	-0.2	0.2

5 locations in 2017: Brandenburg an der Havel, Chemnitz, Döbeln, Dresden and Leipzig

TAG services business

ENERGIE
Wohnen Service GmbH

- **Energy services (100% owned subsidiary)**
  - Heating services for tenants (TAG as owner and operator of heating facilities)
  - In place since 2016
  - Main target: create additional income for TAG and reduce energy costs/ service charges for tenants

in EUR/m	2016	2017	2018E
Revenues (EURm)	4.5	13.0	17.5
No. of employees	3	6	8
FFO impact (EURm)	0.7	0.9	1.0

c. 23,000 units covered in 2017
c. 70,000-75,000 units as long-term goal (c. 90% of total portfolio)

MULTIMEDIA
Immobilien GmbH

- **Multimedia services (100% owned subsidiary)**
  - Cable television and other multimedia services for tenants (TAG as owner of “network level 4”, long-term contracts with signal-suppliers)
  - In place since 2016
  - Main target: create additional income for TAG and reduce cable television costs/ service charges for tenants

	2016	2017	2018E
Revenues (EURm)	0.1	7.4	7.8
No. of employees	1	2	2
FFO impact (EURm)	0.0	2.7	2.8

c. 50,000 units covered in 2017
c. 70,000-75,000 units as long-term goal (c. 90% of total portfolio)

TAG services business

- **Condominium management (100% owned subsidiary)**
  - Condominium management (“WEG-Verwaltung”) for homeowners’ associations
  - Includes management for third parties as well as management of units owned by TAG
  - 4 main locations (Berlin, Erfurt, Gera and Hamburg) within the TAG regions
  - In place since 2001
  - Main target: create additional income for TAG and ensure high quality standards regarding asset and property management

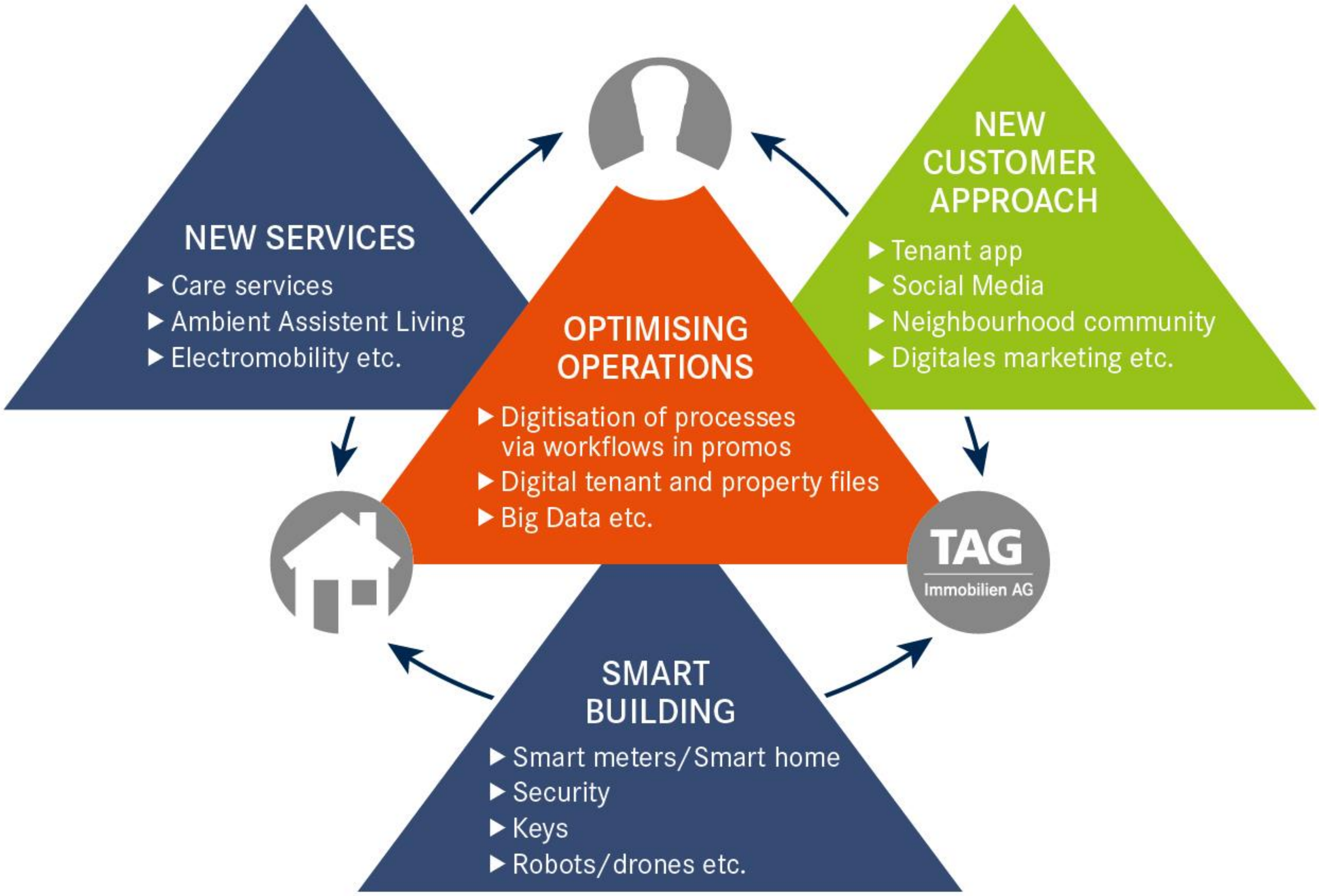
BAU-VEREIN ZU HAMBURG
Hausverwaltungsgesellschaft mbH

Ein Unternehmen der TAG Immobilien Gruppe

in EUR/m	2016	2017	2018E
Revenues (EURm)	1.6	1.8	1.9
No. of employees	26	29	30
FFO impact (EURm)	0.3	0.3	0.3

c. 8,000 units covered in 2017

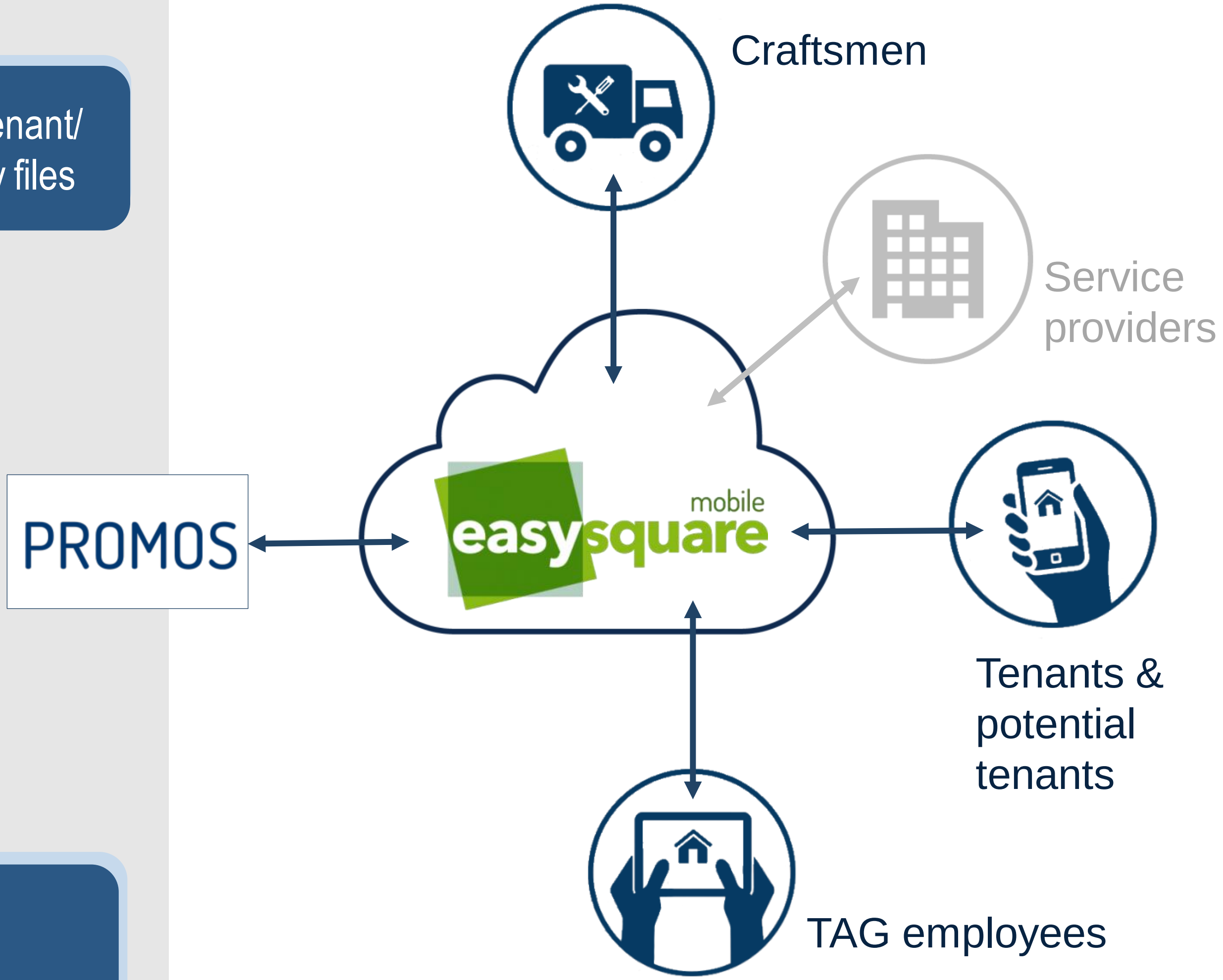
TAG our digitalisation strategy



TAG optimising operations

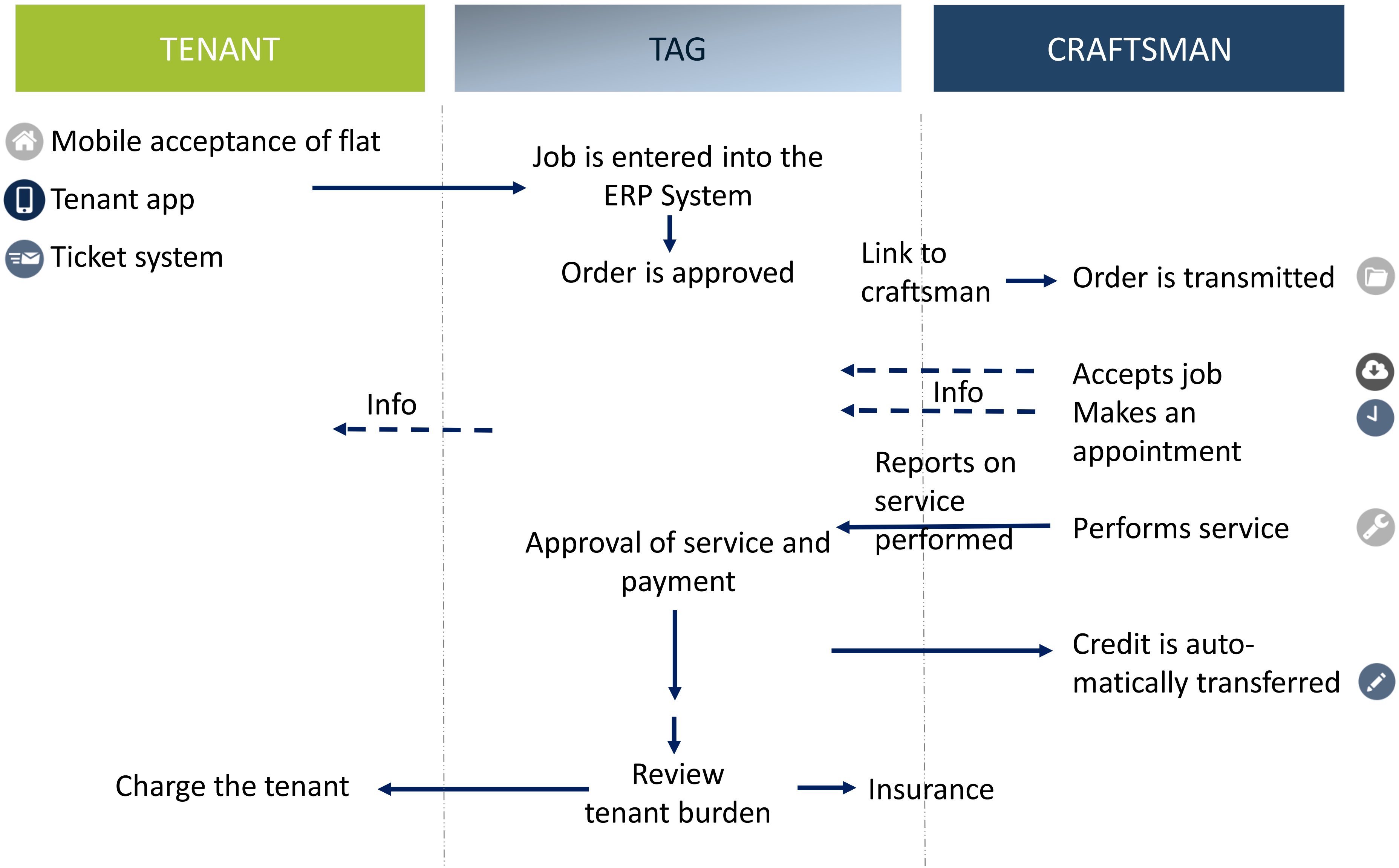
The opportunities of digitalisation lie in the optimisation of business processes

- Ticket system
- Billing workflow
- Digital tenant/ property files
- Ordering process
- Signature process
- Corporate orders
- Mass billing workflow
- Security deposit process
- Payment by instalments
- Onward debit (tenant charging) process
- Reminders/ dunning workflow
- …. ……



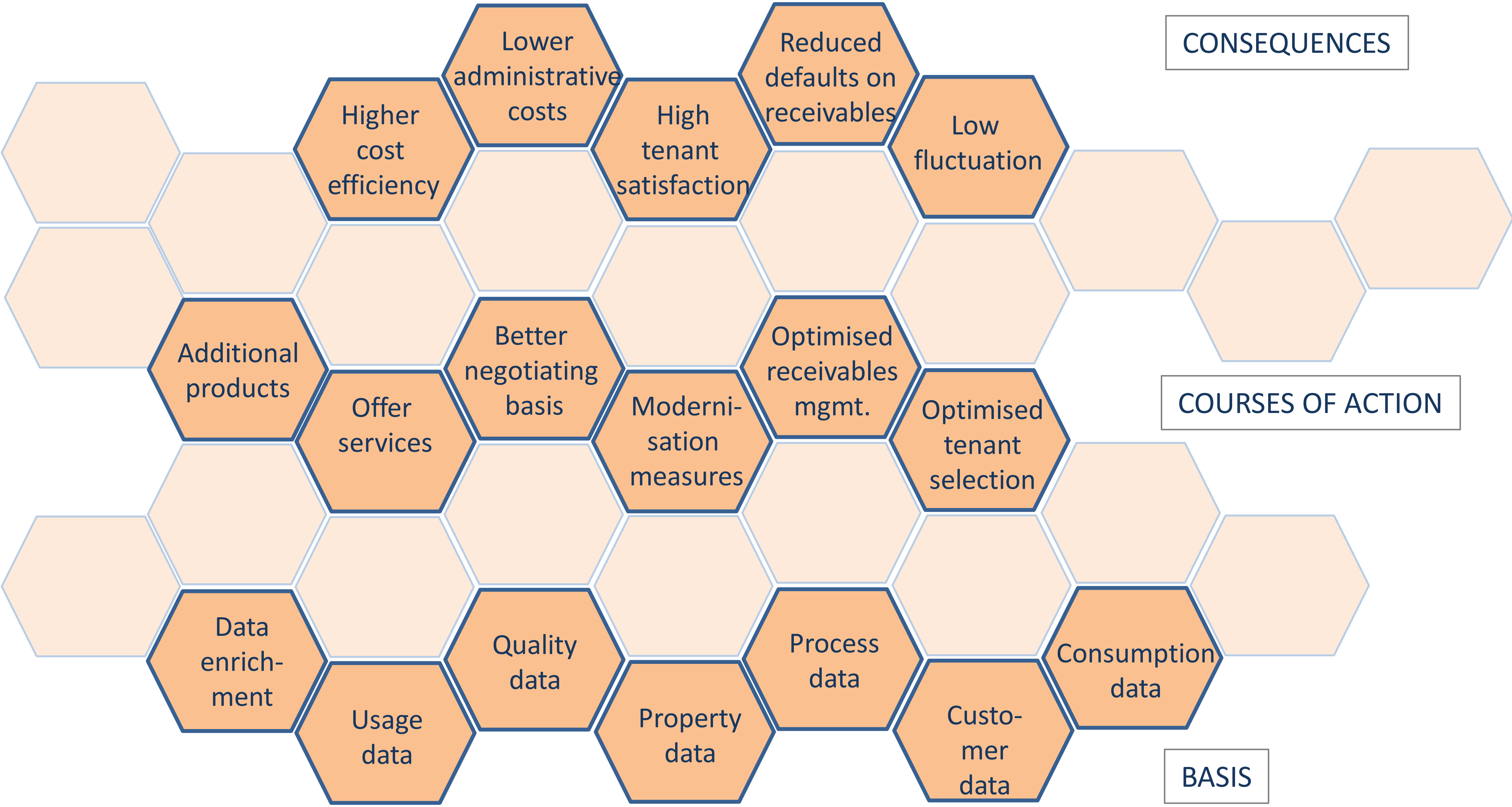
TAG optimising operations

Sample process: damage report

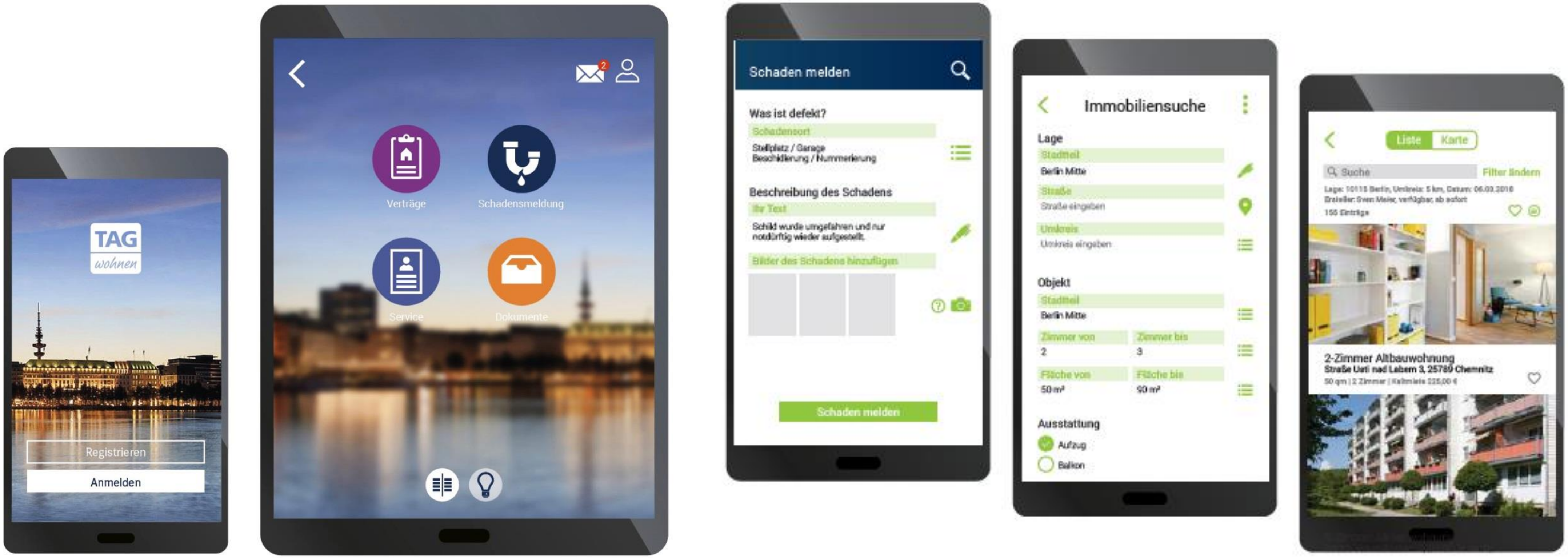


TAG optimising operations

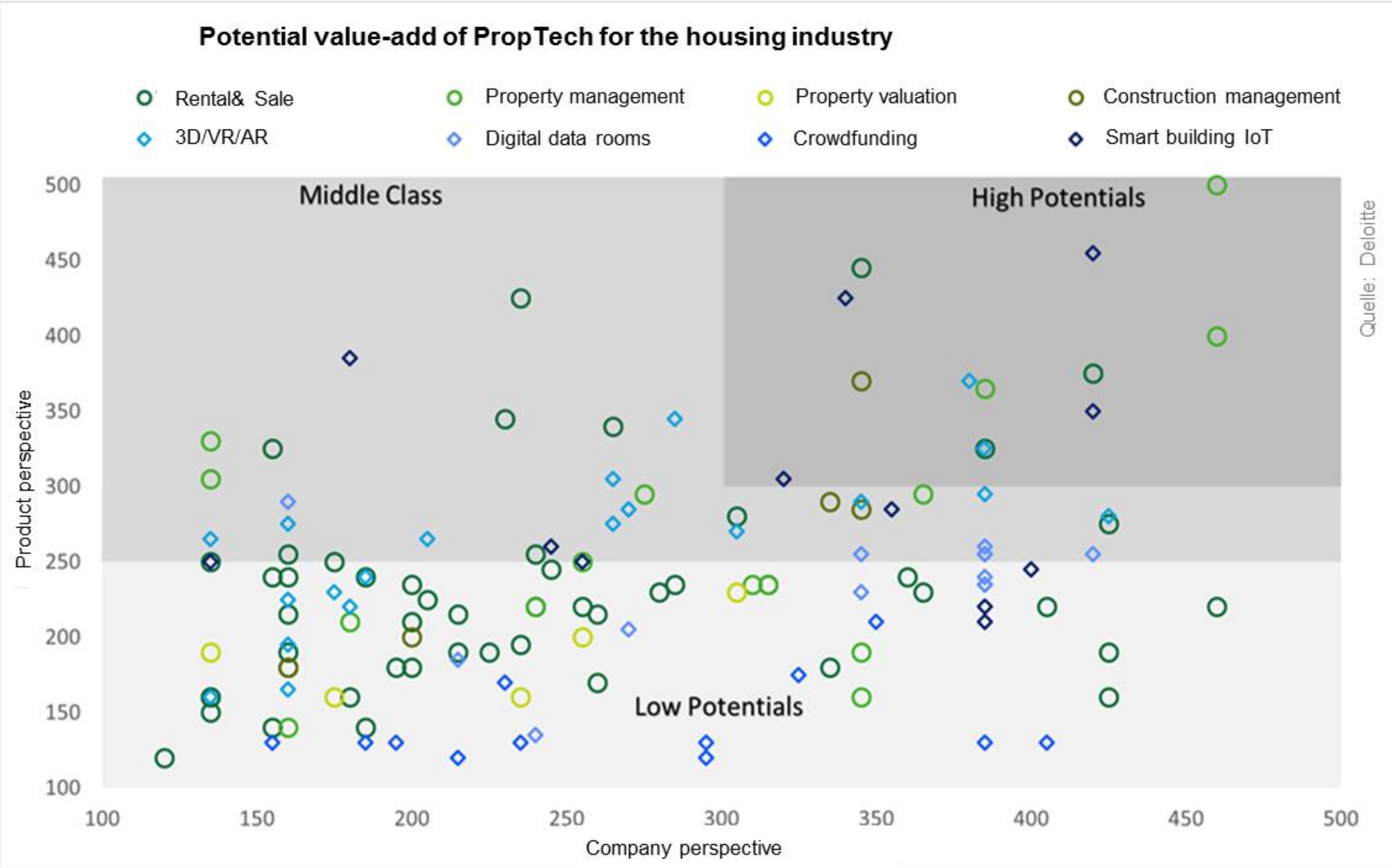
Data is the gold of the digital age



TAG new customer approach



TAG new services / smart building



Part of the opportunity of digitalisation lies in developing new lines of business

TAG new services / smart building

Package-receiving stations

Package-receiving station pilot with potential partners is planned for 2018 in Chemnitz und Salzgitter

Green mobility concepts

Carsharing pilot with e-vehicles and charging infrastructure is in planned for 2018

Future-proof

Cost-efficient

Neighbourhood management

Affordable offers

Smart home

Individual Smart Home modular system for TAG tenants is being tested

Ambient Assisted Living (AAL)

Senior-friendly aids such as sensor technology, voice-activated/controlled assistants, security technology

TAG e-mobility project

Study on e-charging service in the housing industry in 2017/2018

Freistaat Thüringen – Ministerium für Umwelt, Energie und Naturschutz | TAG wohnen | SWE Stadtwerke Erfurt Gruppe | INNOMAN

Number of users (charging requirements)	↔	Technical service (charging technology)	↔	User benefits (service offer)
• >5 users in a residential area can lead to at least cost neutrality, depending on the structure of the charging technology and charging offers • Target: acquire well over 5 daily users		• Easy installation and use • Software integration in e.g. SAP system • Have access to a large charging network including freedom of payment (mobile app, credit card, etc.) • Automatic recognition of whether a charging station is free or occupied by a car.		• Charging facilities available in the immediate vicinity of the apartment (by 2026, 100% of new vehicles should be electric) • In combination with a car-sharing offer, this both meets ecological user requirements and as supports a high user volume for the charging stations due to the e-car offer • Cost savings e.g. for second car and/or petrol

Carsharing pilot with e-vehicles with potential partners planned for 2018 in Thuringia and Lower Saxony

TAG smart home – modular system business model

Basic package (example)

- radiator controls
- window contacts
- central office

- Gross initial yield > 20%

Locations: Brandenburg, Düsseldorf, Erfurt
Base return period 3-5 years

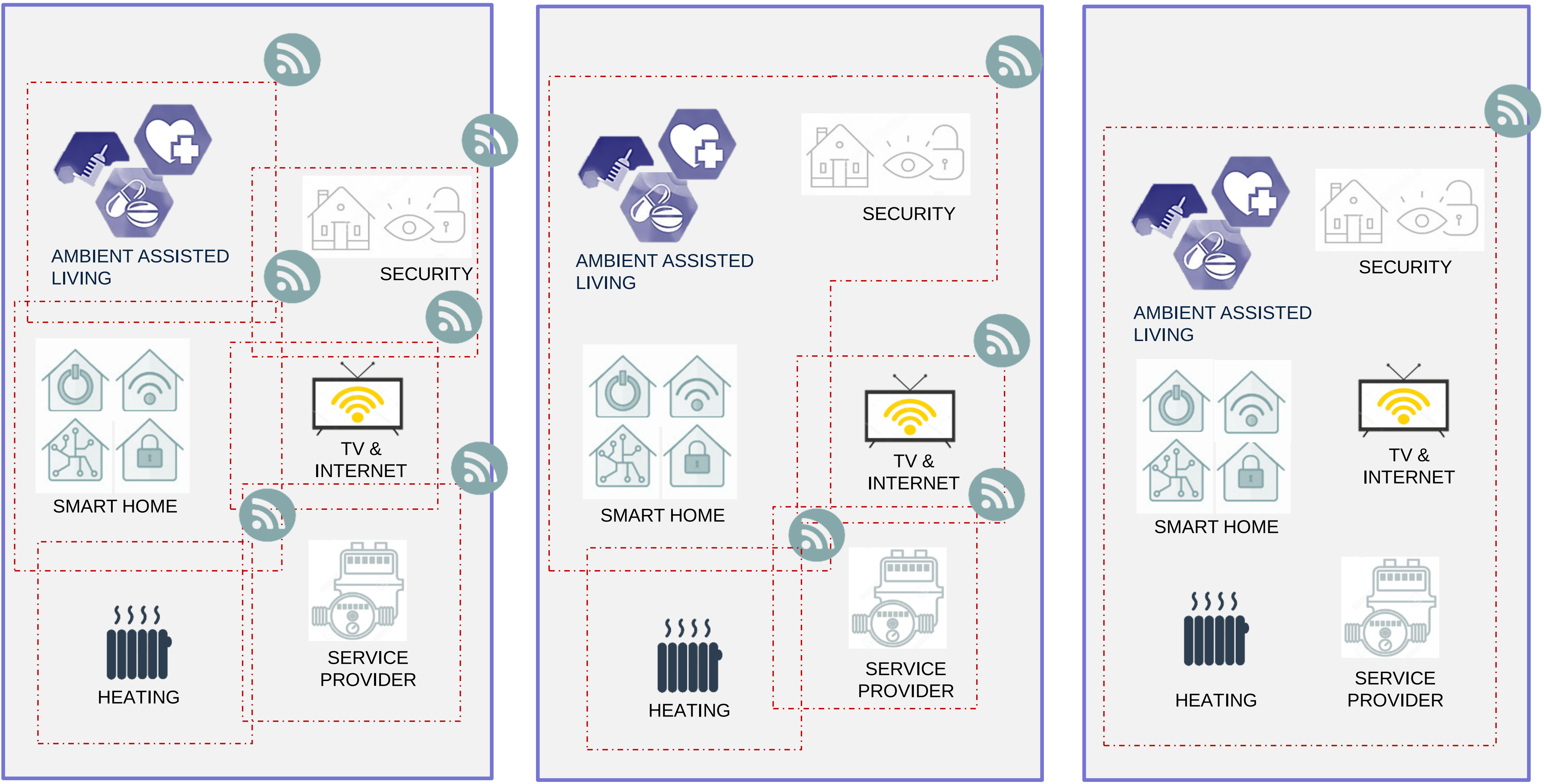
Premium package (example)

Basic package +

- light controls
- electronic door lock
- door contacts
- motion detectors
- tablet
- roller blind controls

- Gross initial yield > 20%

TAG projekt smart home / AAL



TAG developing our own future

We won't wait to be overrun by digitalisation...

…but will seize the digital opportunities with courage, embracing change and transformation, and exploring new paths with flexibility and curiosity.

Q&A

GROWING CASHFLOWS

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BERLIN REGION: EVEN BETTER THAN THE CAPITAL?

Prof. Dr. Tobias Just FRICS



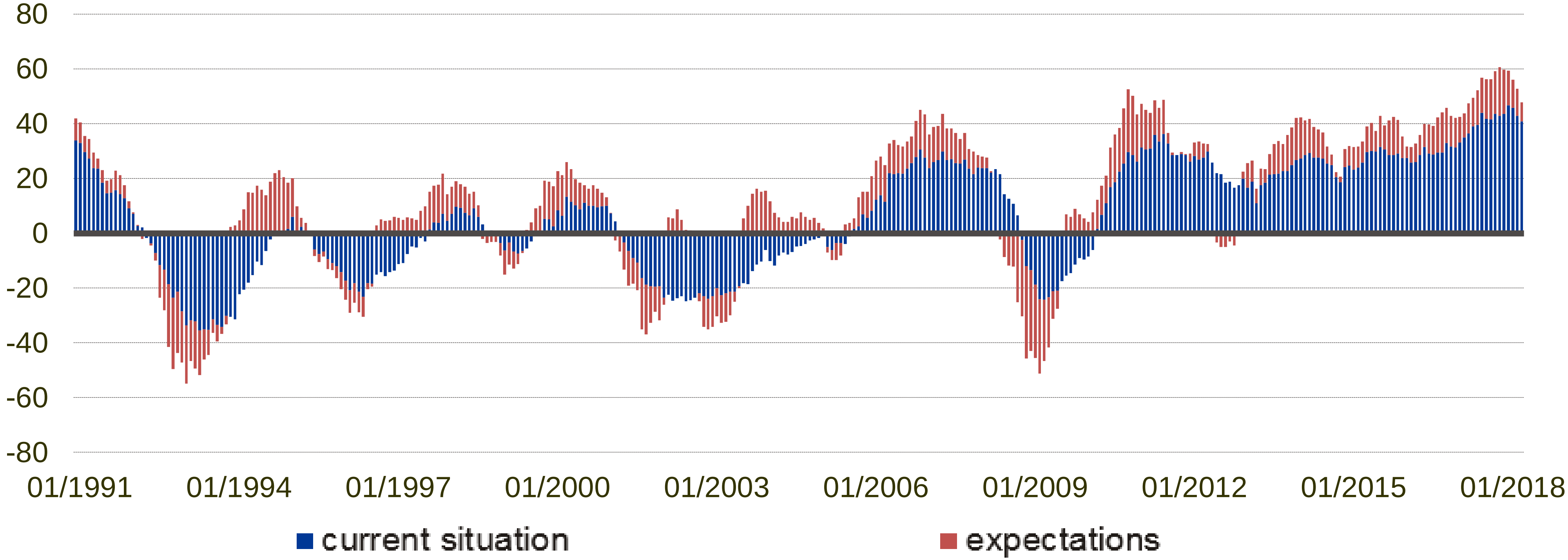


I.
GERMANY'S MACRO STORY

THE GOOD AND THE BAD NEWS ABOUT A LONG UPSWING

Longest upswing since 25 years

Business climate of the German industry, diffusion index (difference of plus and minus)



Source: ifo Institut

AT THE SAME TIME CONSTRUCTIN ACTIVITY REMAINED MUTED

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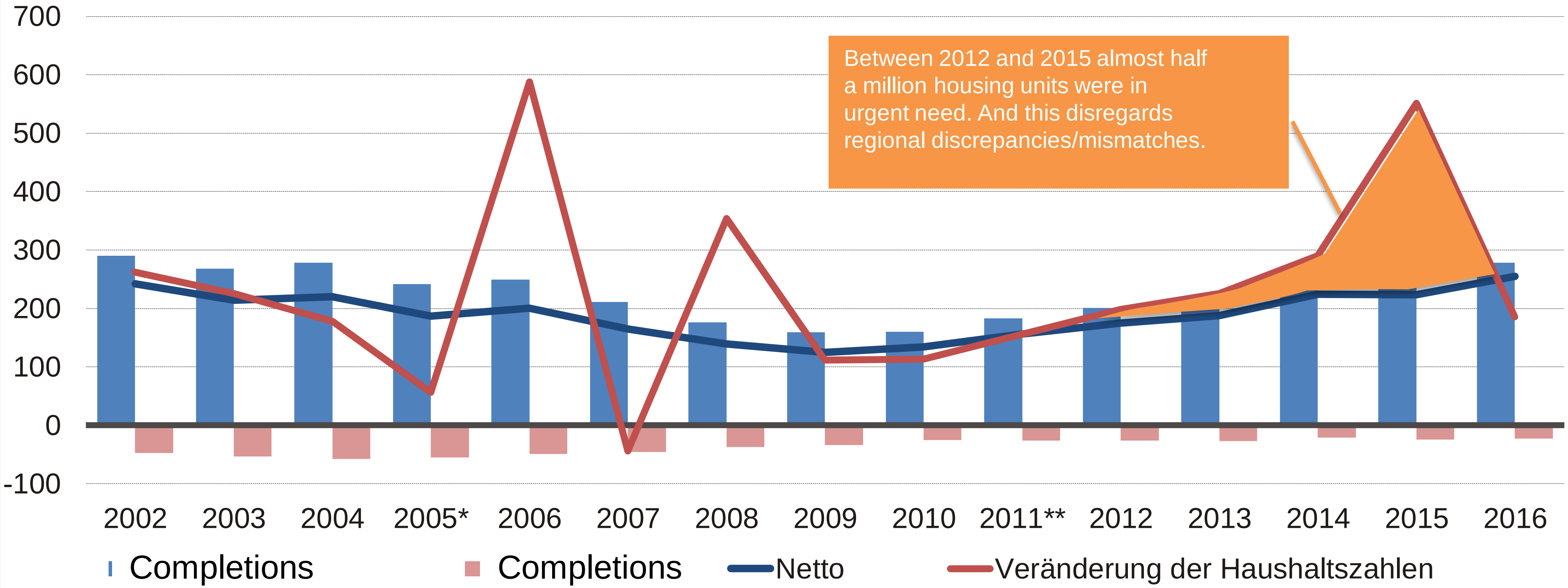
Number of households faster than housing stock

Additional households and net completions in '000



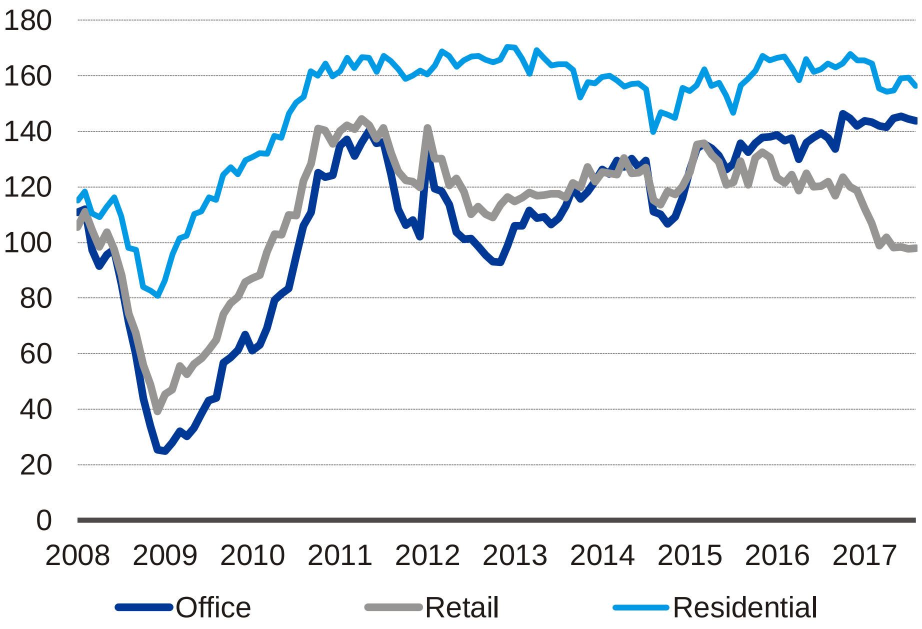
* 2005 Changes in measuring number of households
** 2011 Changes due to new census data (here the 2011 datapoint is smoothed)

Quellen: Statista, own calculations

RISKS MIGHT BE RISING – BUT THE PARTY KEEPS SWINGING

Residential outperforming commercial real estate

German real estate climate, survey results; Values>100 indicate growth



Sources: Deutsche Hypo, bulwiengesa

- Upswing on residential property markets goes on
- Backed by strong economic growth, office markets pick up
- Retail markets cool – but rather due to structural than to cyclical reasons

THE STRANGE ECONOMIC SETTING

Economic growth

+

Low interest rates

+

Inward migration

+

Moderate construction activity

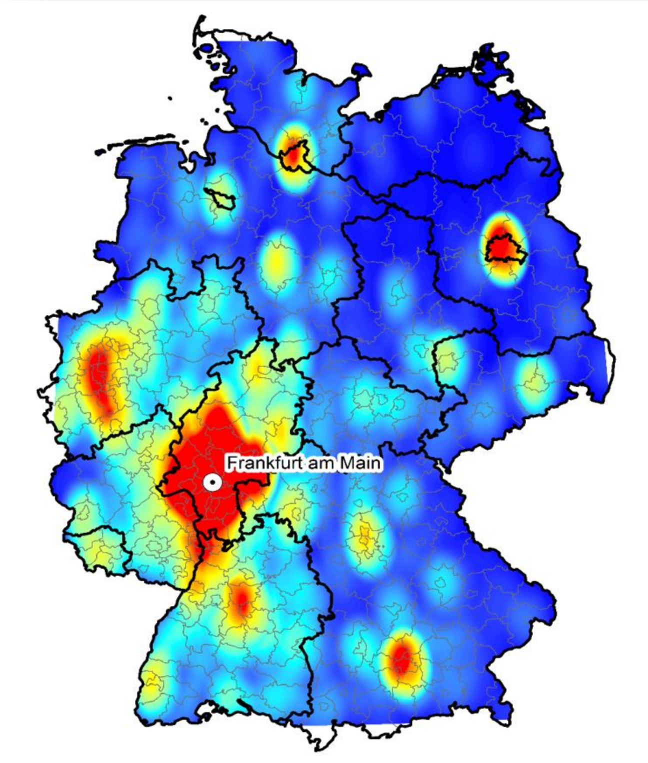
+

II.

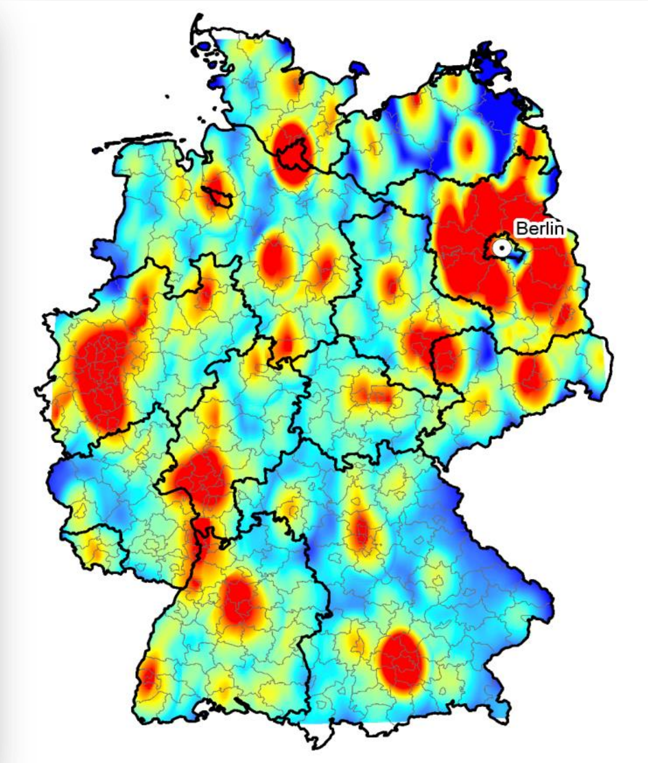
BERLIN: FINALLY A REAL CAPITAL

WHERE DO THEY GO
IMMIGRATION RATE 2014

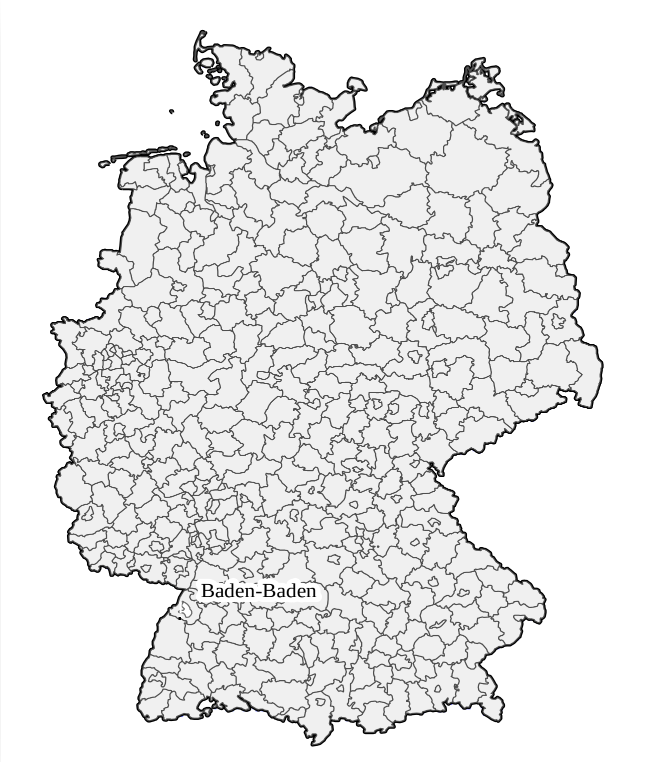
Frankfurt



Berlin



Baden-Baden



Red areas (hot spots) = high immigration; blue (cold spots) = low immigration
Source: Own depcition (based on Kernel density estimation)

START-UP ENVIRONMENT IN BERLIN

	Ranking		Performance	Funding	Market Reach	Talent	Startup Exp.	Growth Index
Silicon Valley	1	◄	1	1	4	1	1	2.1
New York City	2	▲ 3	2	2	1	9	4	1.8
Los Angeles	3	◄	4	4	2	10	5	1.8
Boston	4	▲ 2	3	3	7	12	7	2.7
Tel Aviv	5	▼ 3	6	5	13	3	6	2.9
London	6	▲ 1	5	10	3	7	13	3.3
Chicago	7	▲ 3	8	12	5	11	14	2.8
Seattle	8	▼ 4	12	11	12	4	3	2.1
Berlin	9	▲ 6	7	8	19	8	8	10
Singapore	10	▲ 7	11	9	9	20	9	1.9
Paris	11	◄	13	13	6	16	15	1.3
Sao Paulo	12	▲ 1	9	7	11	19	19	3.5
Moscow	13	▲ 1	17	15	8	2	20	1
Austin	14	New	16	14	18	5	2	1.9
Bangalore	15	▲ 4	10	6	20	17	12	4.9
Sydney	16	▲ 4	20	16	17	6	10	1.1
Toronto	17	▼ 9	14	18	14	15	18	1.3
Vancouver	18	▼ 9	18	19	15	14	11	1.2
Amsterdam	19	New	15	20	10	18	16	3
Montreal	20	New	19	17	16	13	17	1.5

NET INCOME IN BERLIN

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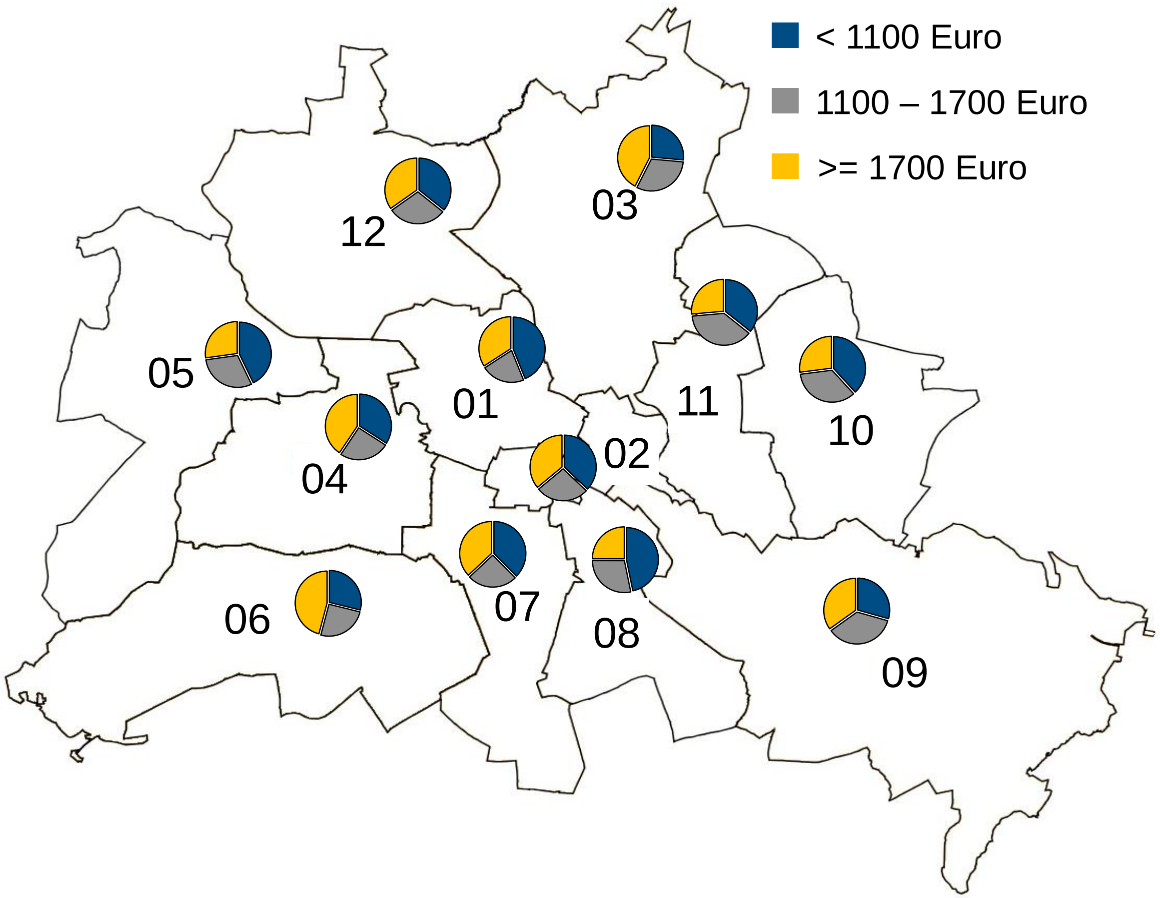
Share of population with respective income



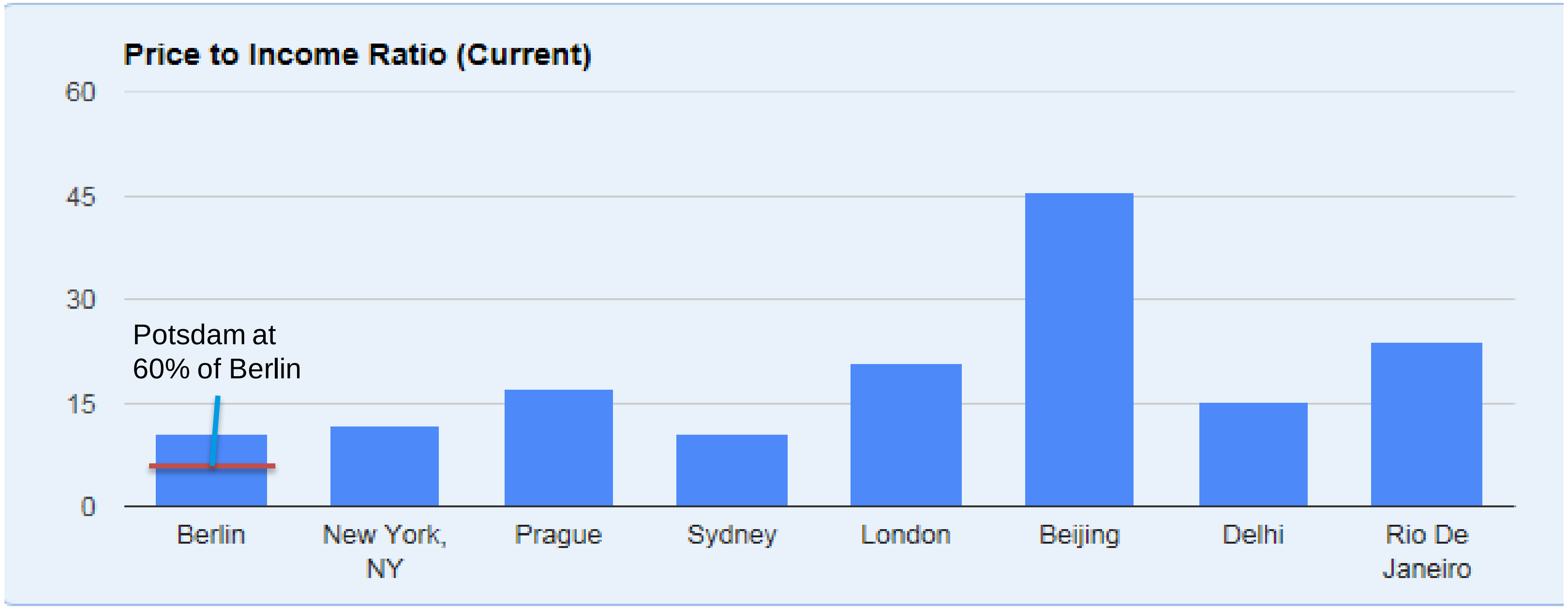
	01 Mitte	02 Friedrichshain-Kreuzberg	03 Pankow
< 1100 Euro	43,9%	37,1%	26,4%
1100 - 1700 Euro	21,9%	26,9%	31,1%
>= 1700 Euro	34,2%	36,0%	42,5%
	04 Charlottenburg-Wilmersdorf	**05 Spandau**	**06 Steglitz-Zehlendorf**
< 1100 Euro	34,1%	42,8%	28,8%
1100 - 1700 Euro	25,3%	30,0%	25,3%
>= 1700 Euro	40,6%	27,2%	45,9%
	07 Tempelhof-Schöneberg	**08 Neukölln**	**09 Treptow-Köpenick**
< 1100 Euro	37,6%	46,8%	29,4%
1100 - 1700 Euro	25,4%	28,2%	35,8%
>= 1700 Euro	37,0%	25,0%	34,9%
	10 Marzahn-Hellersdorf	**11 Lichtenberg**	**12 Reinickendorf**
< 1100 Euro	38,2%	35,7%	35,7%
1100 - 1700 Euro	34,8%	37,9%	29,5%
>= 1700 Euro	27,0%	26,4%	34,8%

Source: Amt für Statistik Berlin-Brandenburg

RELATIVELY CHEAP OR RELATIVELY EXPENSIVE?

Berlin is catching up to other metropolises

Prices in relation to income (2018)



Source: Numbeo (2018)

BERLIN‘S PERIPHERY DOES NOT SHOW „BUBBLE RISK“

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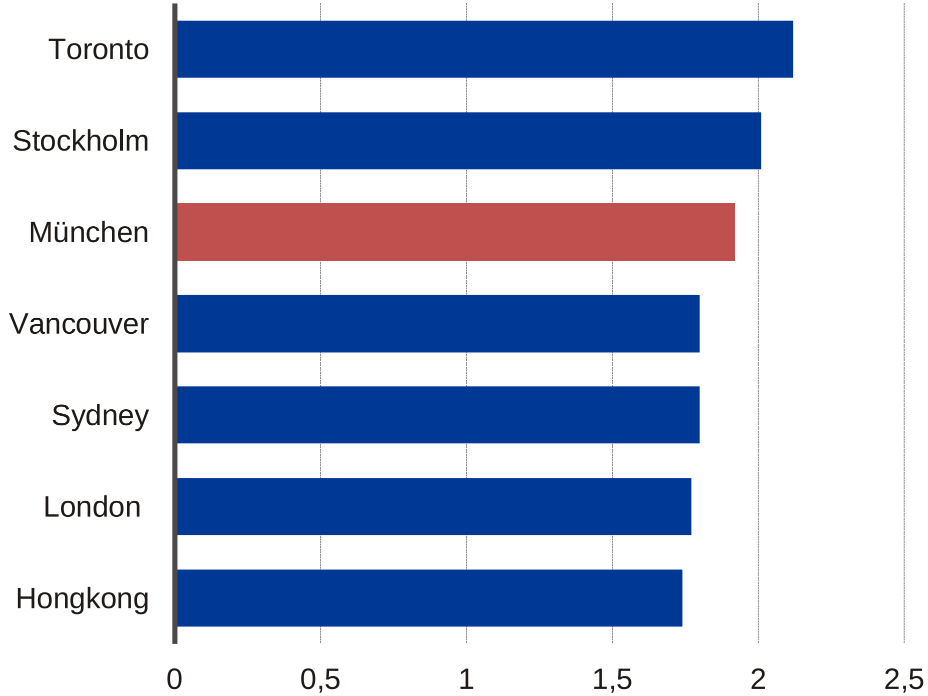
UBS Bubble Indikator

Index values > 1,5 signal highest Risk (Bubble-Risk)



Source: UBS

Center and periphery

Comparison of four indicators

	Berlin	Potsdam	Magdeburg
Price/ income	10,51	6,82	5,75
Mortgage/ income	61,49%	40,8%	34,42%
Rental yield city	3,51%	7,21%	3,67%
Rental yield periphery	6,05%	6,05%	4,34%

Source: numbeo, 2018

YIELDS: UNDER PRESSURE – AS EVERYTHING THESE DAYS

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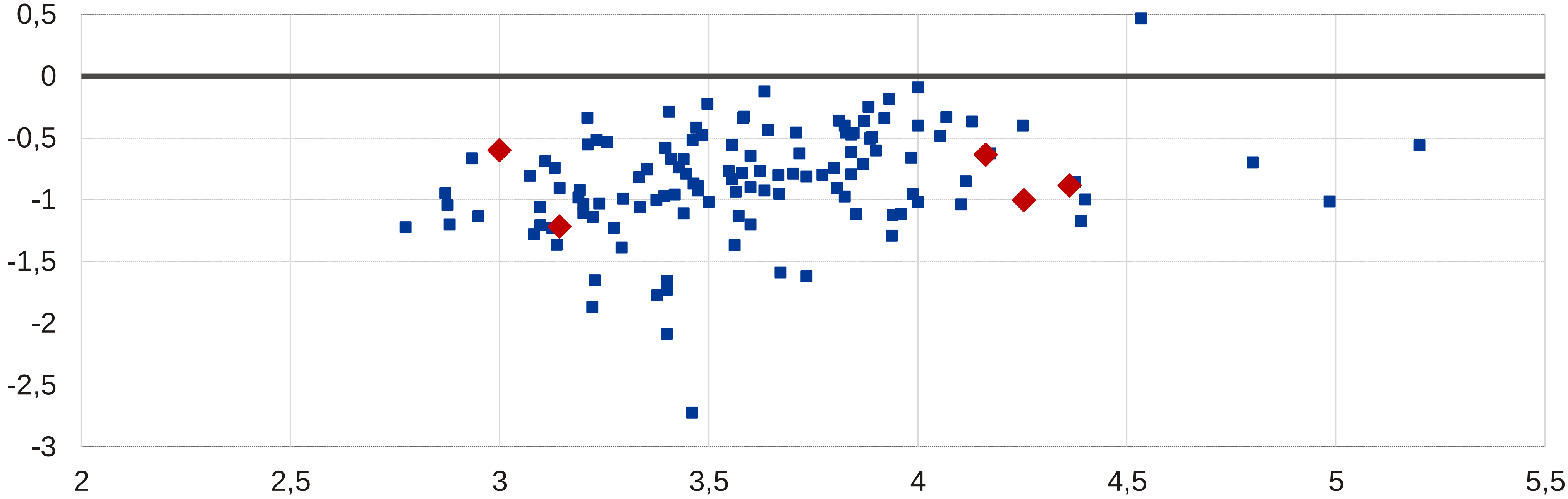
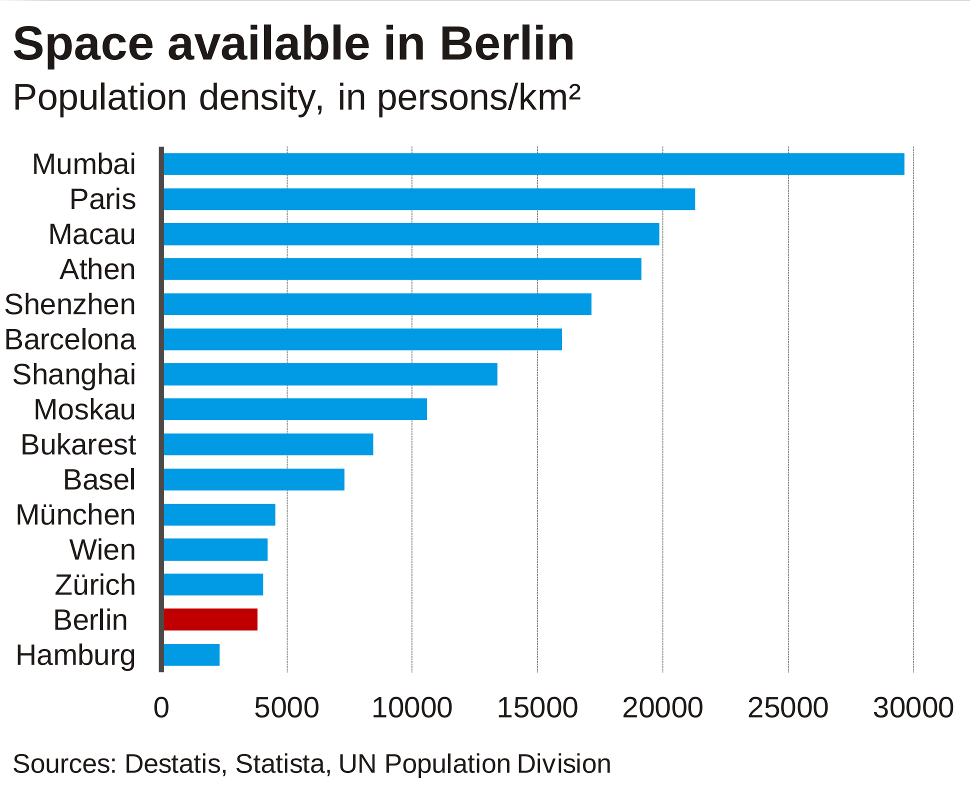
Modest yield compression in Berlin-Brandenburg

x-axis: residential rental yield 2017
y-axis: yield compression since last peak in %-points



Source: bulwiengesa

GERMAN CITIES ARE NOT VERY DENSE?



- German cities are not very densely populated
- There are some innter city quarters with more than 10.000 inh./km² in Berlin, Hamburg or Munich, however, this accounts to only very few quarters
- If Berlin were constructed as densely as Basel, there could live as many as 6,6 m inhabitants
- However, this is very unlikely to happen
- Therefore pressure on Berlin housing market reaches the metro-region

III.
MORE THAN JUST THE CORE CITY

LET US TAKE A CLOSER LOOK AT MIGRATION PATTERNS

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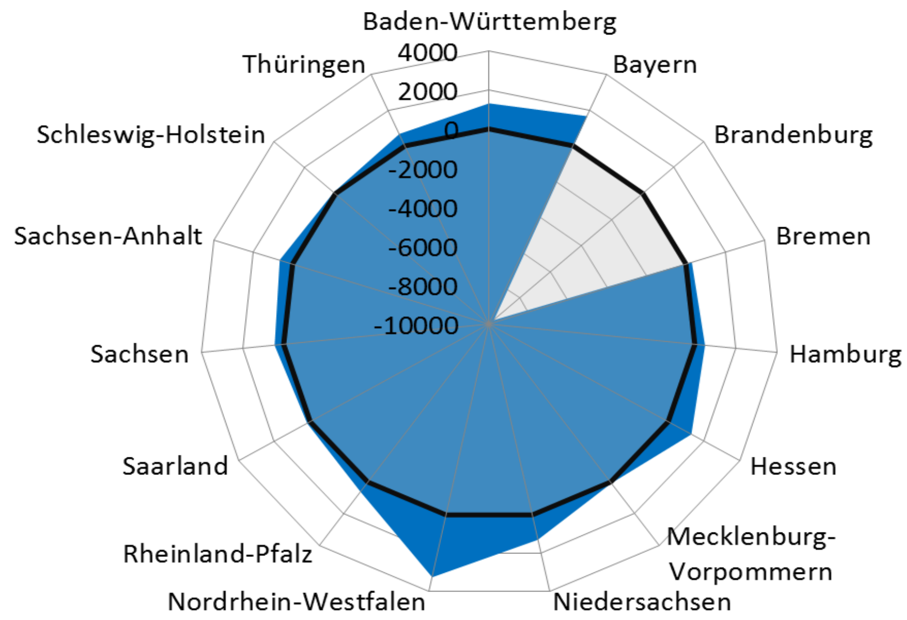
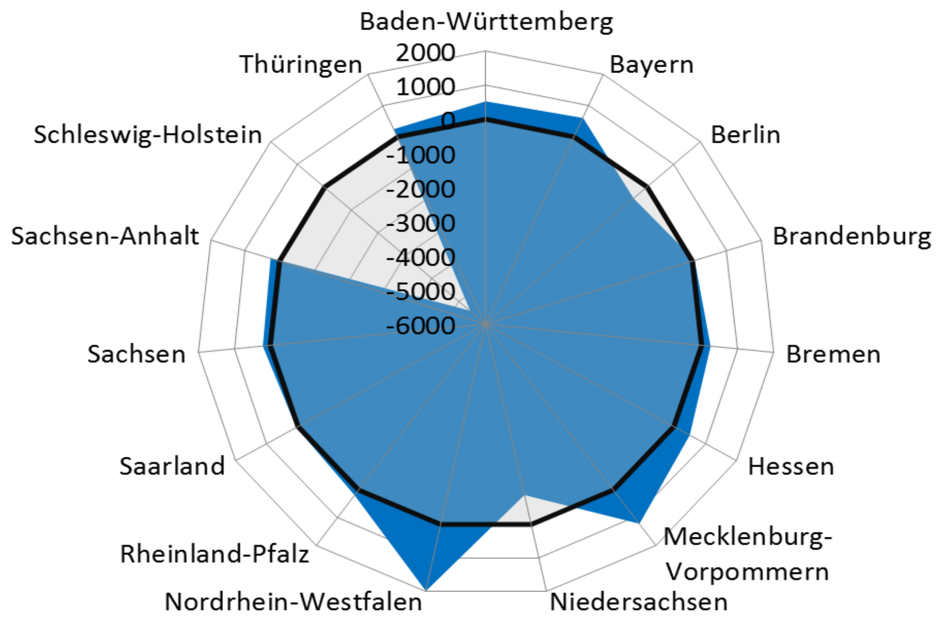
Berlin

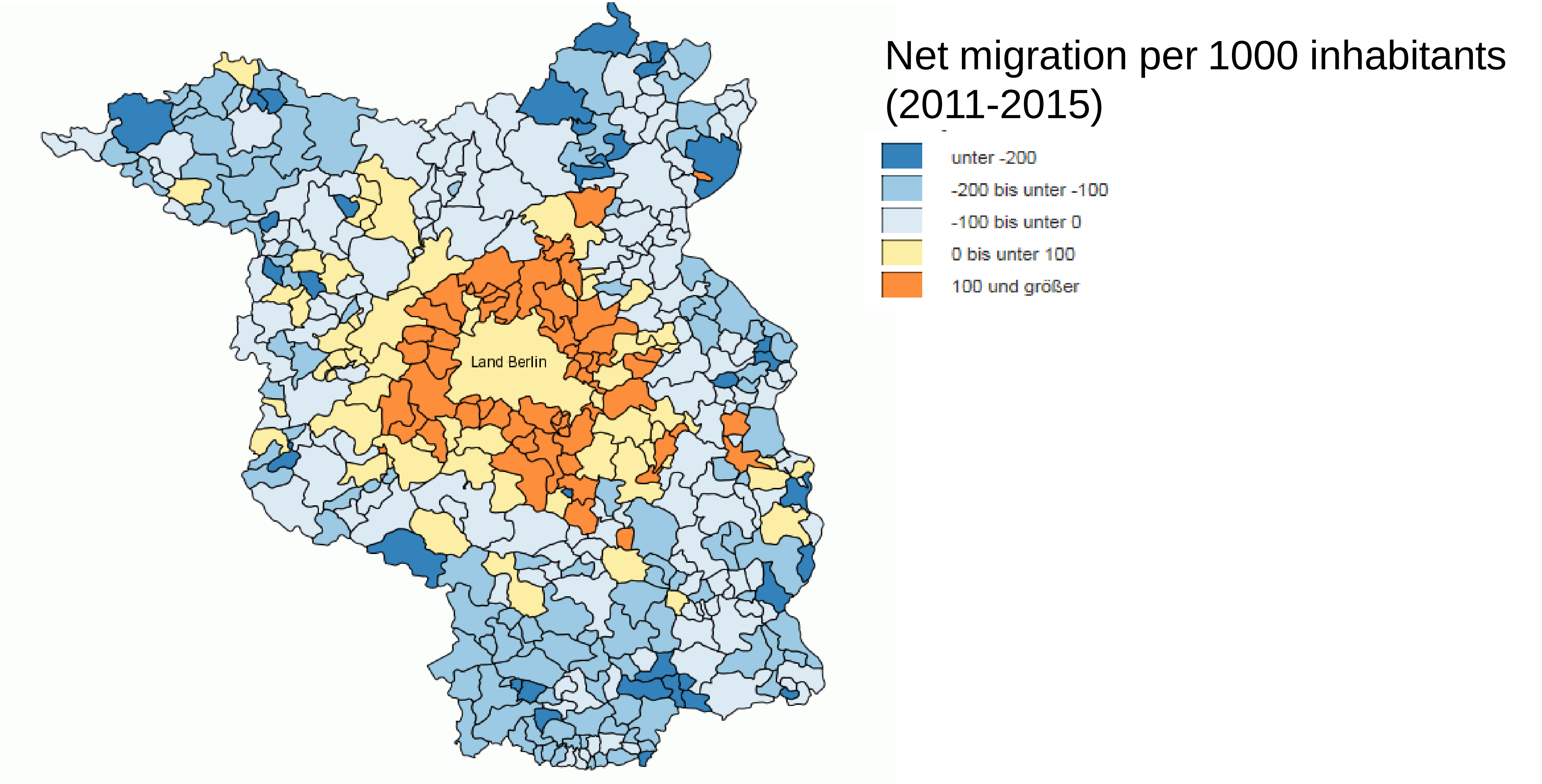


Hamburg



Explanation: The blue areas depict migration to the city. If this is outside the dark ring, there is net migration from the respective Bundesland to the city. Inside the ring, net migration is outside the city!
Source: own calculations

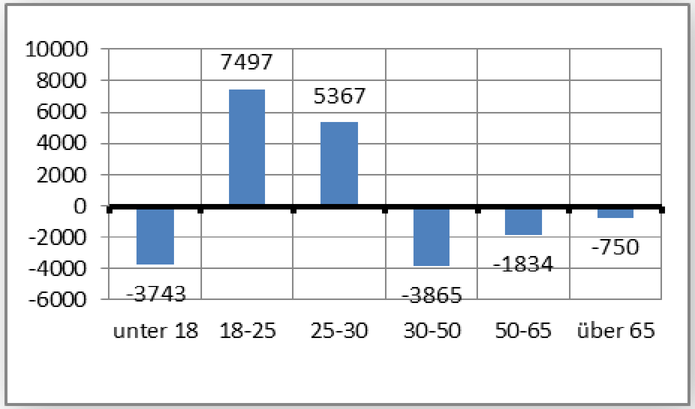
AND EVEN CLOSER



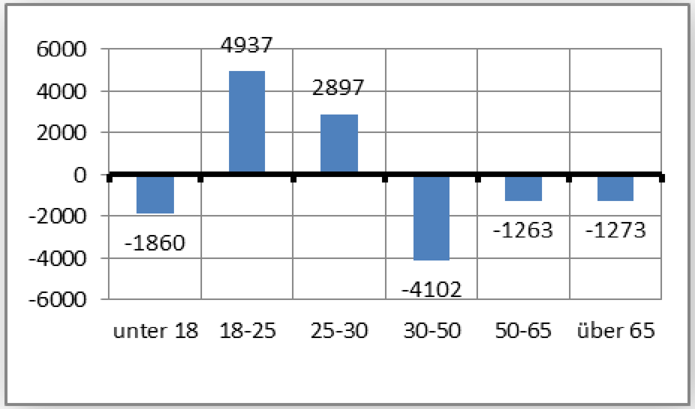
Source: Metropolregion Berlin-Brandenburg

BERLIN IS TARGETED BY YOUNG PEOPLE AND FOREIGNERS

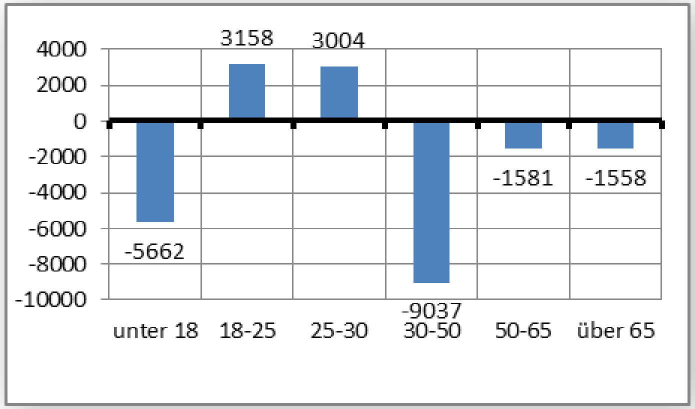
Berlin



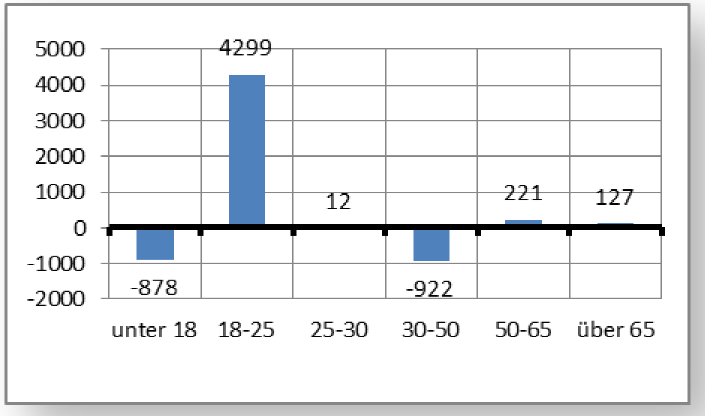
Cologne



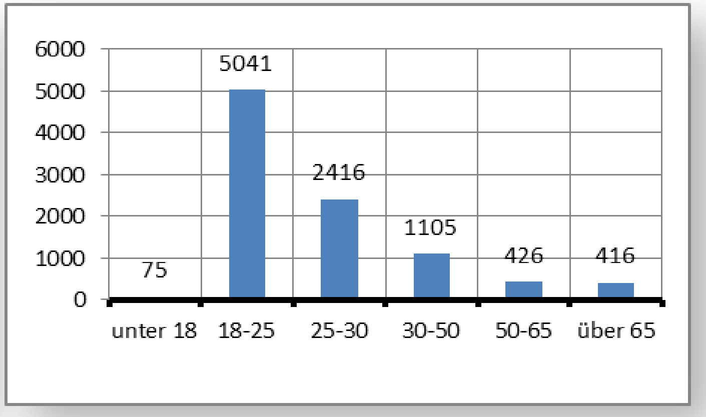
Munich



Dresden



Leipzig



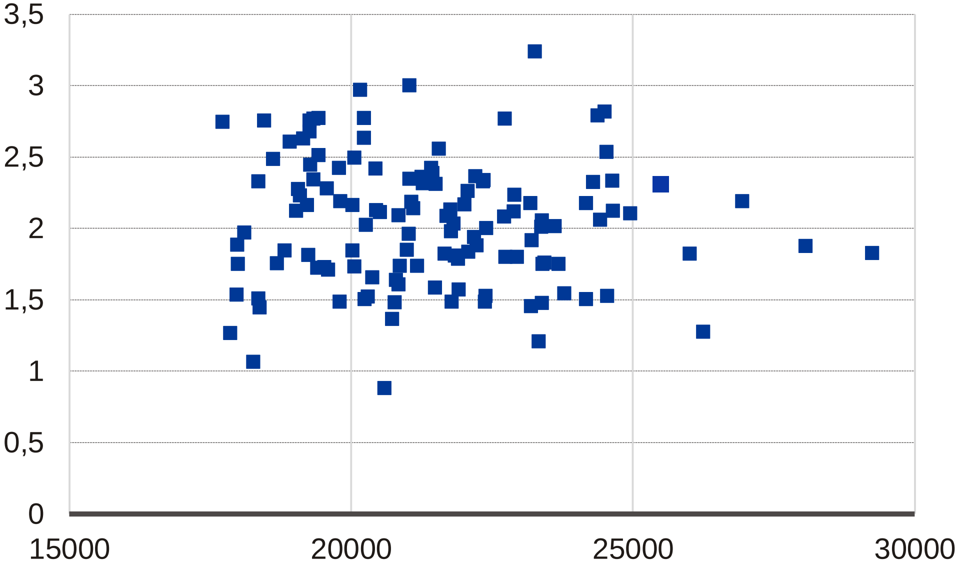
Source: Destatis, own calculations

ATTRACTIONS ATTRACT YOUNG PEOPLE

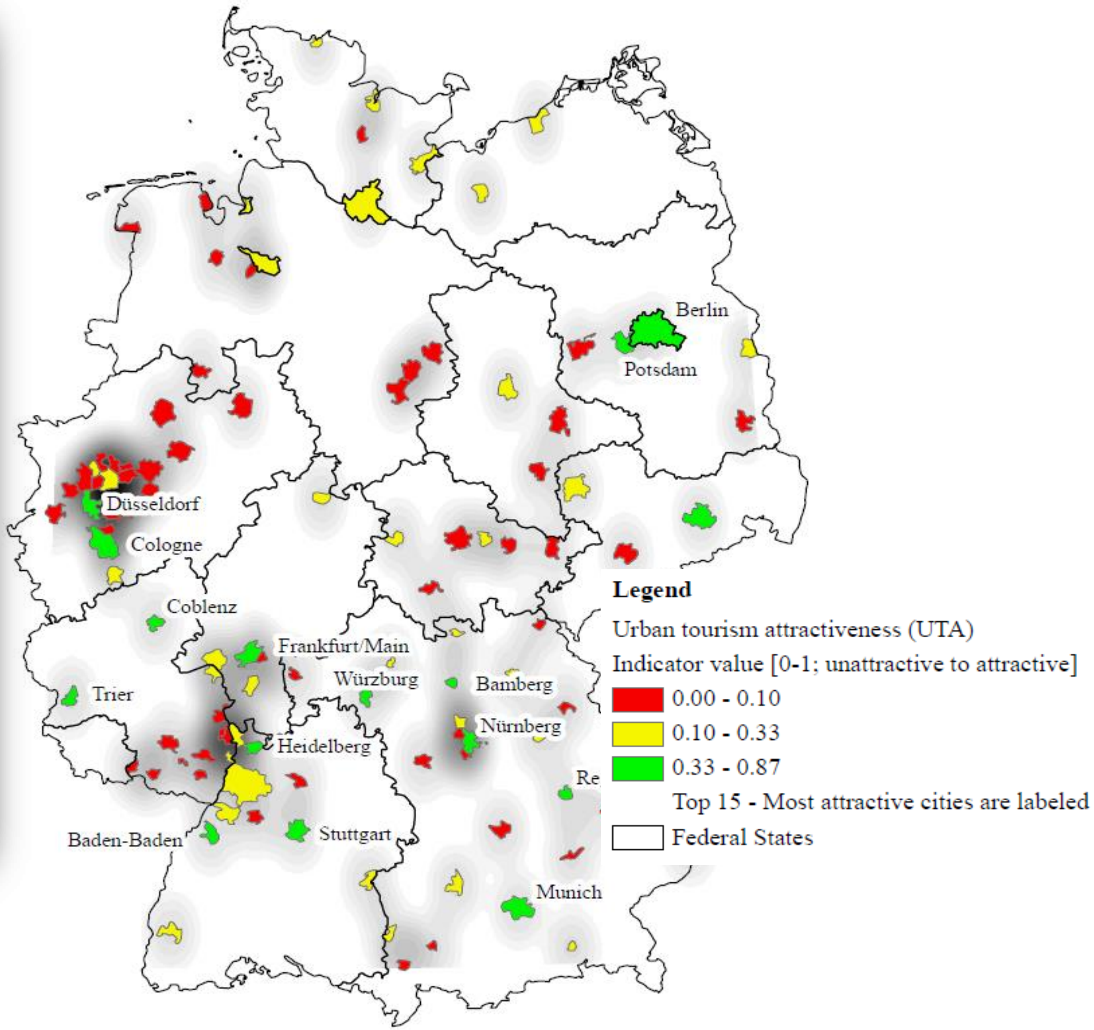
Purchasing power

x-axis: Purchasing power 2016

y-axis: average growth rate 2009, %



Source: Gfk



Schäfer, Philipp und **Just, Tobias** (2018). Does urban tourism attractiveness affect young adult migration in Germany? In: *Journal of Property Investment and Finance* 36 (2018) 1

LABOUR MARKET BOOMS OUTSIDE BERLIN (AT LEAST IN SOME POCKETS)

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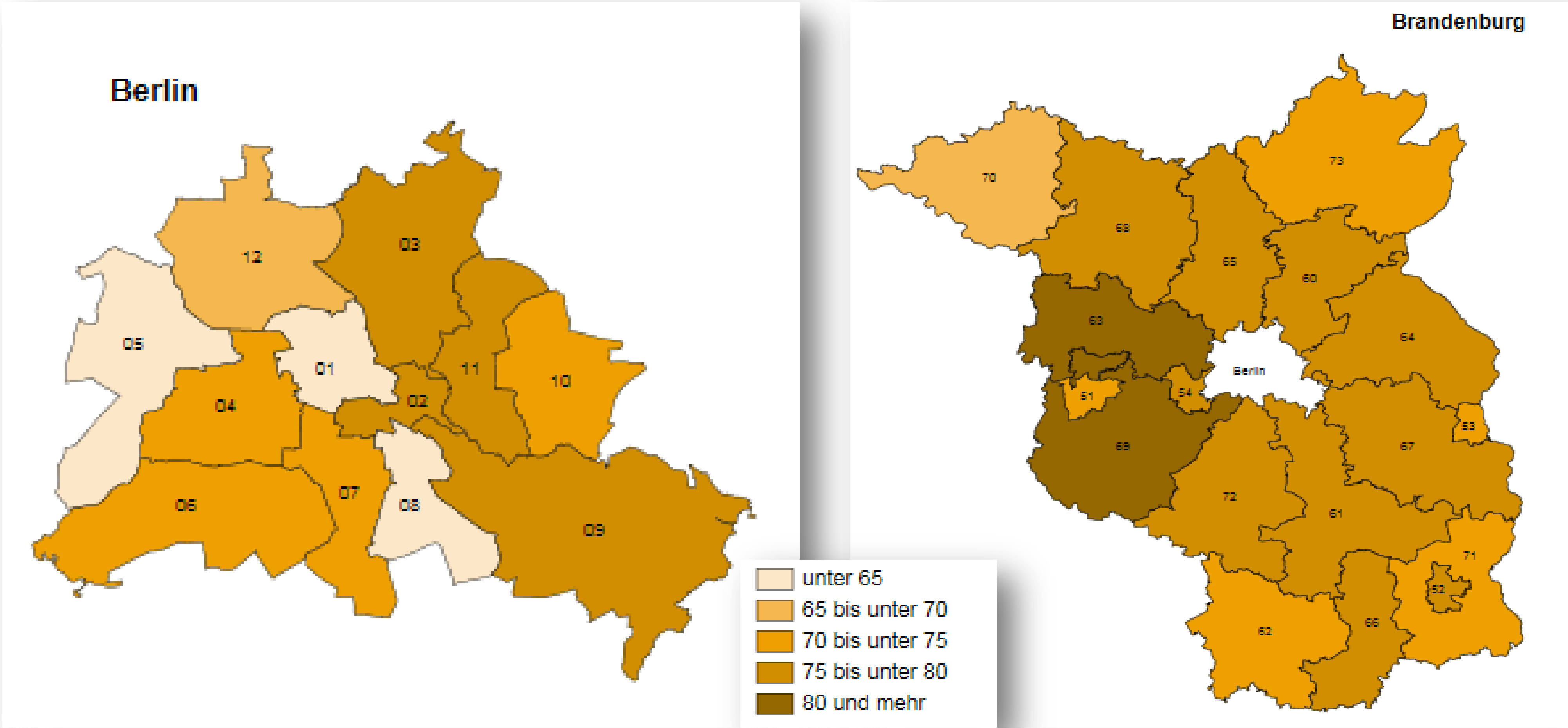
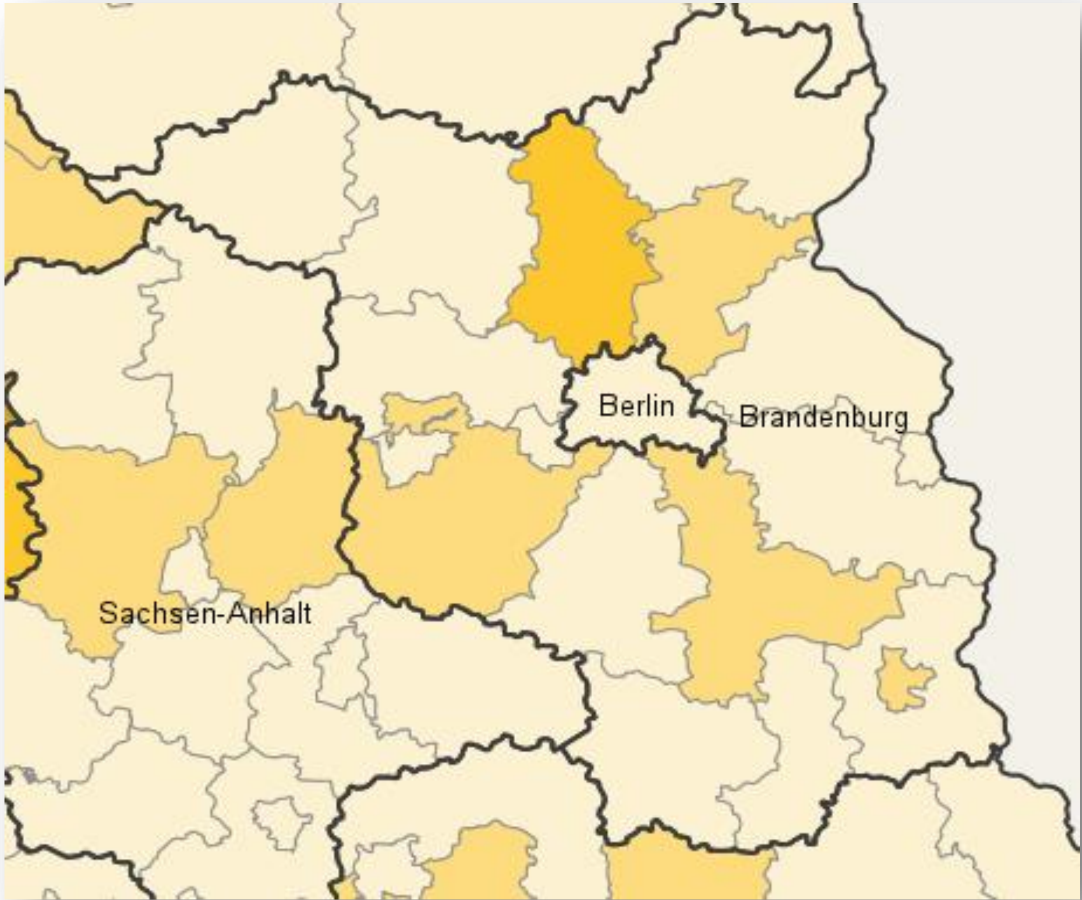
Labour market participation rate, 2016



Source: Stat. Office Berlin-Brandenburg

WHERE HOUSEHOLD INCOME TOPS BERLIN'S INCOME LEVELS



Household net income in EUR (2015)

- 16.274 bis unter 19.149
- 19.149 bis unter 20.929
- 20.929 bis unter 22.059
- 22.059 bis unter 23.444
- 23.444 bis 35.663

Source: Stat. Office Berlin-Brandenburg

OVERALL COMPARISON

	Berlin	Potsdam	Cottbus	Branden-burg
Pop. Growth (2011-2015)	5,8%	6,4%	0,0	0,0
Purchasing power (2012-2017	12%	9%	9%	6%
Unemployment (2012-2017)	-22%	-17%	-30%	-35%
Employment/ 1000inh. 2017	405	502	458	408
New build./1000 inh.	7,95	24,79	10,41	8,19
Rental growth 2012-2017	34%	17%	13%	14%
Price growth 2012-2017	57%	46%	25%	43%
Affordability rent (2017)	28%	23%	16%	16%

Sources: Stat. Amt Berlin-Brandenburg, numbeo,

ONE REGION WITH SEVERAL CENTERS

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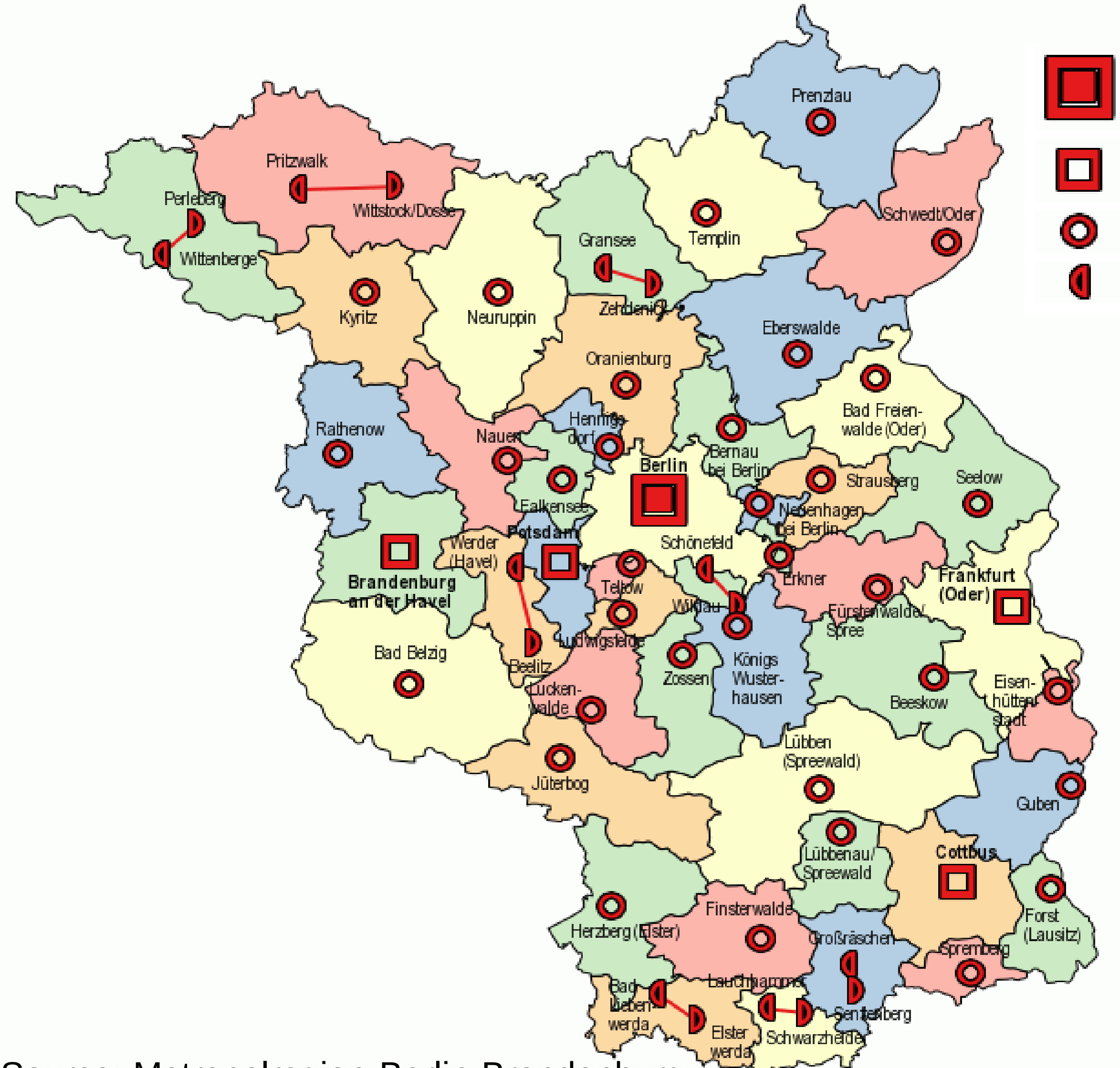


Metropolis

Major center

Medium center

Medium center with shared functions

Source: Metropolregion Berlin-Brandenburg

IV.
CONCLUDING REMARKS

BERLIN – LIVEABLE AND IMPROVING

	2010	2014	2018
1	Vienna	Vienna	Vienna
2	Zurich	Zurich	Zurich
3	Geneva	Auckland	Auckland
4	Vancouver	Munich	Munich
5	Auckland	Vancouver	Vancouver
6	Dusseldorf	Dusseldorf	Dusseldorf
7	Frankfurt	Frankfurt	Frankfurt
8	Munich	Geneva	Geneva
9	Bern	Copenhagen	Copenhagen
10	Sydney	Bern	Basel
11	Copenhagen	Sydney	Sydney
12	Wellington	Amsterdam	Amsterdam
13	Amsterdam	Wellington	Berlin
14	Ottawa	Ottawa	Bern
15	Brussels	Toronto	Wellington
16	Toronto	Berlin	Melboune
17	Berlin	Hamburg	Toronto
18	Melboune	Melboune	Luxembourg
19	Luxembourg	Luxembourg	Ottawa
20	Stockholm	Stockholm	Hamburg

Source: Mercer

IMPLICATIONS FOR REAL ESTATE MARKETS

Overall German macro environment still strong

- Income and job growth continues
- This is still a very untypical setting
- Construction and migration will likely balance

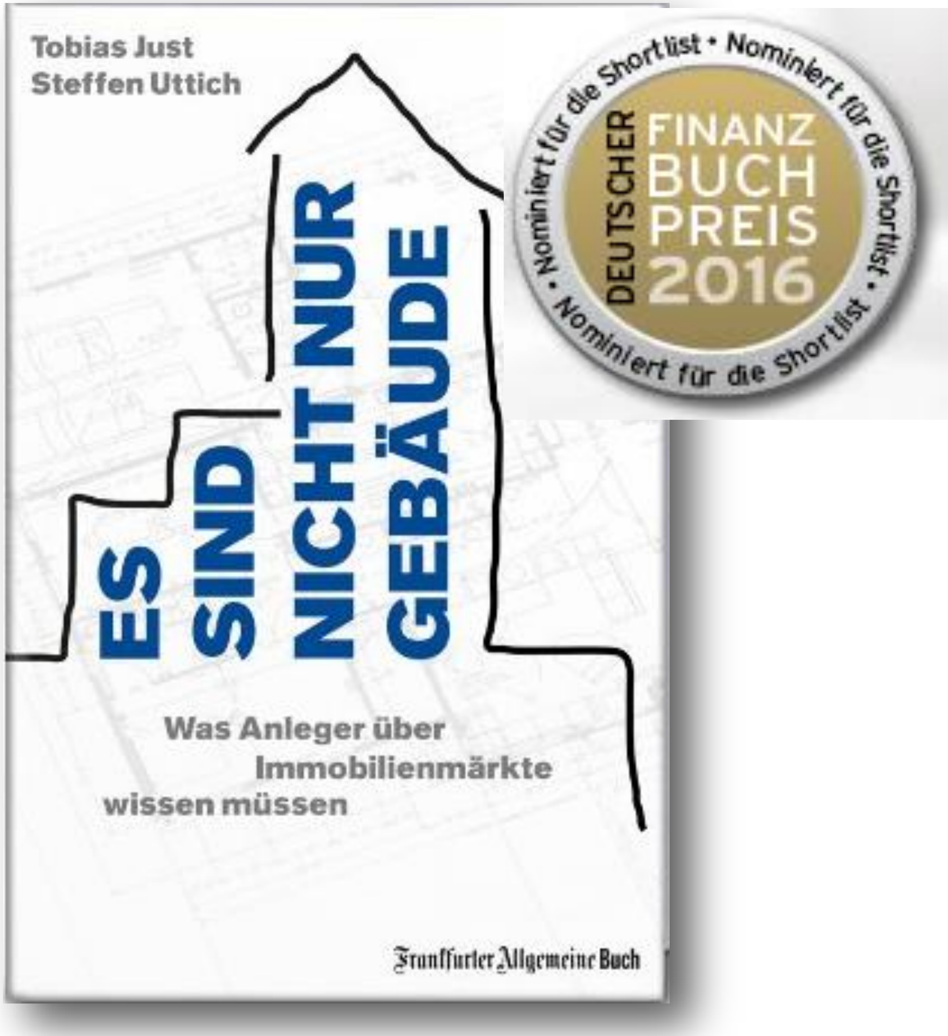
Berlin has become real capital of Germany

- Migration patterns mirror economic and cultural and political strength
- Young persons and foreigners migrate to Berlin
- Start-up scene and academic life promise ongoing upward trend

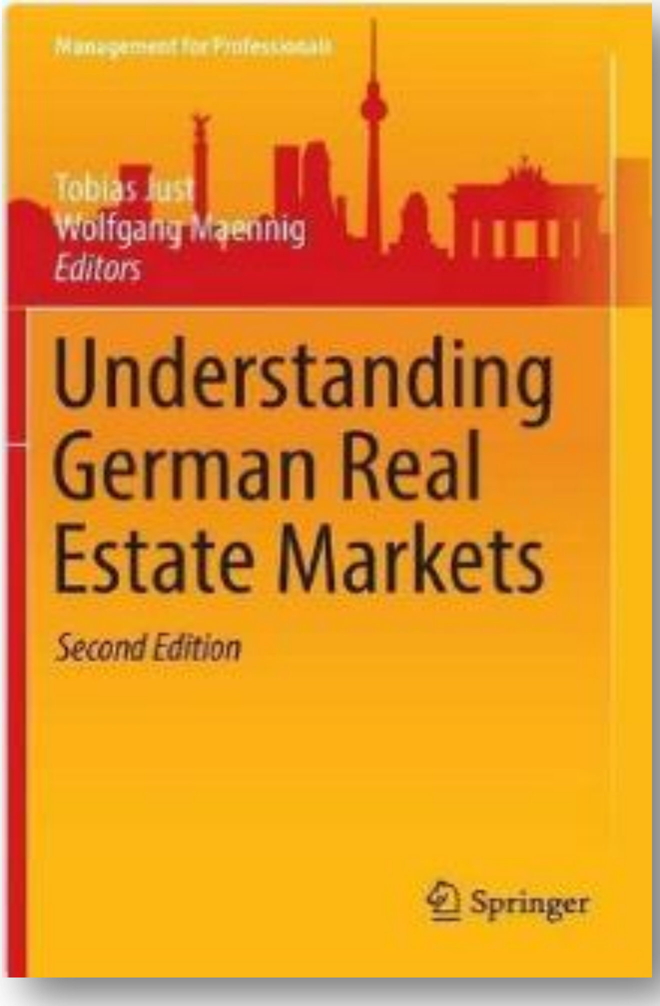
Periphery benefits from Berlins strength

- The vicinity of Berlin offers affordable living for families
- And some centers function as sub-centers
- However, outer areas are still stressed – risk premia are necessary

REFERENCES



2. Edition to be published soon



Published 2017

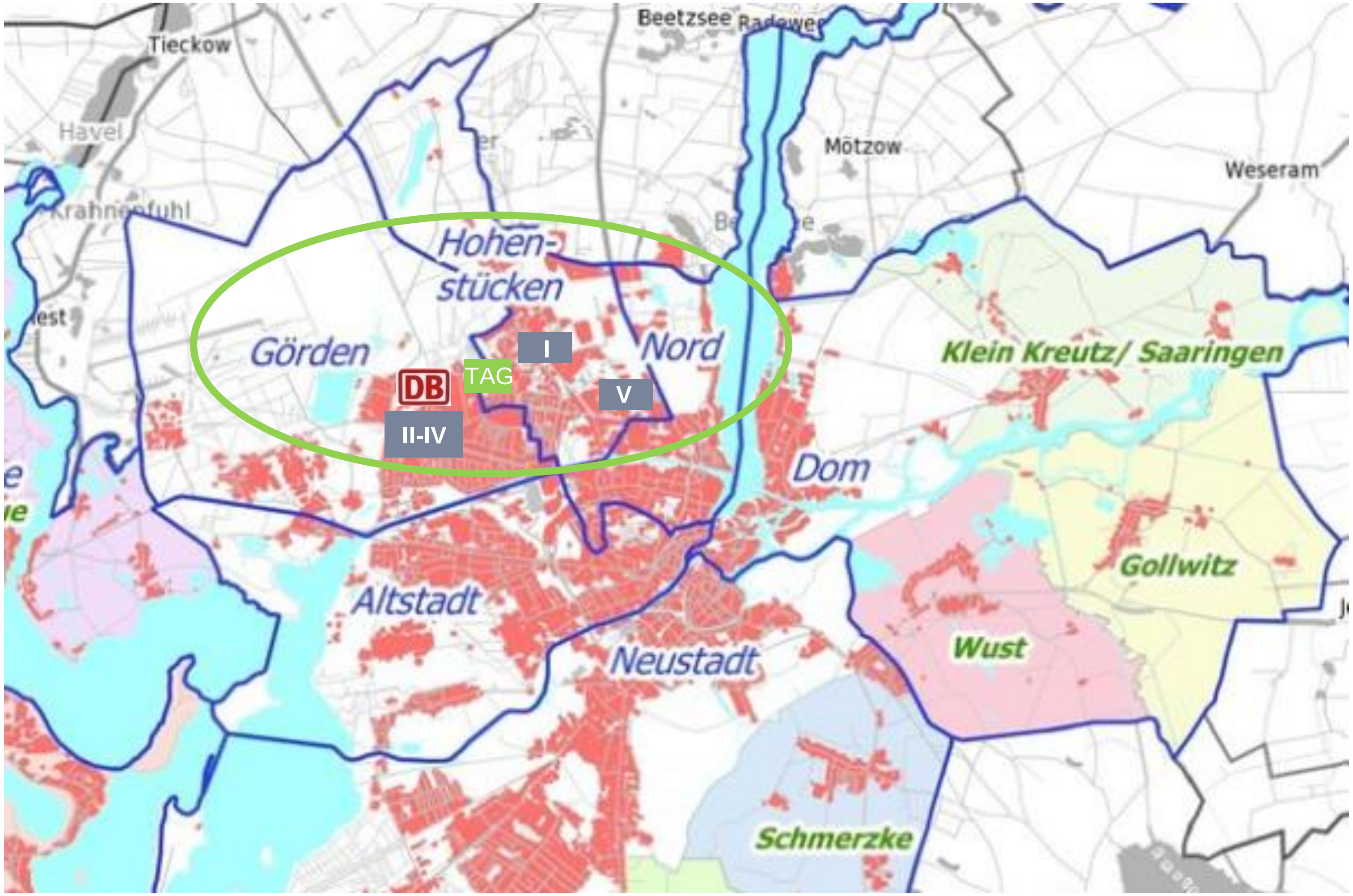
Q&A

Capital Markets Day 2018
PROPERTY TOUR
Brandenburg an der Havel

GROWING CASHFLOWS

TAG
Immobilien AG

TAG portfolio Brandenburg – locations



TAG wohnen

VISIT I Hohenstücken
VISIT II-IV Görden
VISIT V Nord

TAG 2018

Tour I: Hohenstücken „Bavaria“

TAG portfolio Brandenburg – **Hohenstücken**

City quartier:	Hohenstücken (“Bavaria”)
Example:	Rosa-Luxemburg-Allee 98

- Type: Prefab buildings
- Year of construction: 1983 (partly refurbished)
- Apartment size: 1 - 4 rooms
- Rental structure: long time tenants, subsidized rentees

- Capex example: 3 room apartments/ 69 sqm, 12-15 TEUR (incl. bathroom)

Units Rosa-Luxemburg-Allee	799
Vacancy	22.9%
Current net rent EUR/sqm	4.73
Re-letting rent EUR/sqm	5.25 - 6.25

TAG 2018

Tour II:
Görden „Havel“

TAG portfolio Brandenburg – **Görden**

City quartier: Görden (“Havel”)
Example: Gördenallee 168 – redevelopment portfolio

- Type: Settlement buildings
- Year of construction: 1937
- Apartment size: 1 - 2 rooms
- Rental structure: mostly vacancy

Units Gördenallee redevelopment portfolio	303
Vacancy	64.2%
Current net rent EUR/sqm	4.11
Re-letting rent EUR/sqm	--

TAG portfolio Brandenburg – **Görden**

City quartier: Görden (“Havel”)
Example: Haydnstraße 1

- Type: Settlement buildings
- Year of construction: 1937 (refurbished 2000)
- Apartment size: 1 - 4 rooms
- Rental structure: long time tenants, elderly people, family, singles

- Capex example: 3 room apartments/ 60 sqm; 8 - 12 TEUR (incl. bathroom)

Units Görden – Haydnstraße	754
Vacancy	5.8%
Current net rent EUR/sqm	5.31
Re-letting rent EUR/sqm	5.80 – 7.25

TAG portfolio Brandenburg – **Görden**

City quartier: Görden ("Havel")
Example: Beethovenstraße 18 - "SMART HOME"

- Type: Settlement buildings
- Year of construction: 1937 (refurbished 2013)
- Apartment size: 1 - 3 rooms
- Rental structure: long time tenants, higher income earners
- Capex : example: 2 room apartments/ 58 sqm 2 - 4 TEUR

Units Beethovenstraße 16 / 18	18
Vacancy	6.3%
Current net rent EUR/sqm	6.66
Re-letting rent EUR/sqm	6.70 – 7.60

TAG
2018

Tour III:
Nord

TAG portfolio Brandenburg – **Nord**

City quartier:	Nord (Other)
Example:	Bergstraße 8d

- Type: Settlement buildings
- Year of construction: 1994
- Apartment size: 2 - 3 rooms
- Rental structure: long time tenants, higher income earners

- Capex example: c.5 TEUR

Units residential	49
Units commercial	17
Vacancy residential	1.7%
Vacancy commercial	38.1%
Current net rent EUR/sqm	6.28
Re-letting rent EUR/sqm	6.50 – 7.00

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