Aktuelle IuK Trends
Konvergenz und Attraktivität von Angeboten im mobilen Umfeld

Erstellt für: Forschungsausschuss Münchner Kreis

München, 29. November 2005

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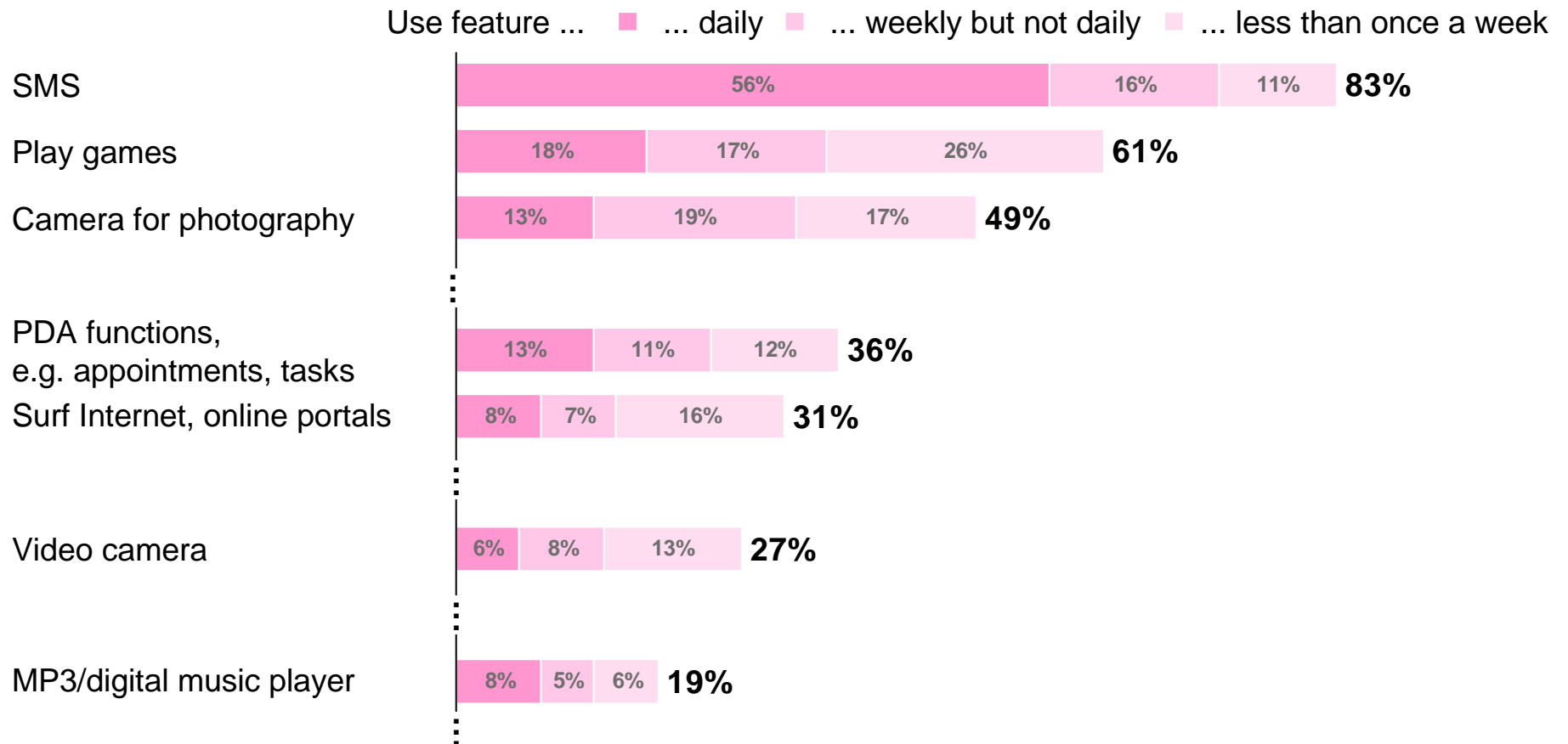
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Study Design – Global Tech Insight (GTI) 2005

Die ausgewählten Charts stammen aus einer aktuellen - aber nicht repräsentativen - Studie von Studie von TNS Infratest

Universe:
- 6.807 consumers in 15 countries across the world, aged 16 to 49, who use the Internet weekly and own one or more ICE devices (mobile phone, PDA, laptop)

Covered countries:
- USA, UK, France, Germany, Sweden, Japan, Korea, Australia, NZ, HK, Netherlands, China, Russia, Brazil, India

Interview method:
- 4 markets interviewed face-to-face with focus on 2 to 4 top cities (China, Russia, Brazil, India)
- All other countries interviewed on-line, national coverage

Number of Interviews:
- USA and China minimum 600 Interviews each
- All other countries: minimum 400 Interviews each

Interview Period:
- July and August 2005

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Usage of Mobile Phone Applications

Die Konvergenz auf Geräteseite – im Sinne der Nutzung "unkonventioneller Anwendungen" – wird bereits stärker gelebt als erwartet

Use feature ... ■ ... daily ■ ... weekly but not daily ■ ... less than once a week

Application	daily	weekly but not daily	less than once a week	Total
SMS	56%	16%	11%	**83%**
Play games	18%	17%	26%	**61%**
Camera for photography	13%	19%	17%	**49%**
PDA functions, e.g. appointments, tasks	13%	11%	12%	**36%**
Surf Internet, online portals	8%	7%	16%	**31%**
Video camera	6%	8%	13%	**27%**
MP3/digital music player	8%	5%	6%	**19%**

Base: All mobile phone users. n= 6517

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Mobile phone applications used frequently

- Messaging/communications applications are used most regularly in Japan, UK, Australia and France.
- Imaging applications are most regularly used by mobile users in Korea, Hong Kong and the UK.
- Entertainment applications are most regularly used in Hong Kong, UK and Russia.
- Mobile phone users in Japan are most regular users of the mobile Internet, followed by users in the developing markets of Russia Metro and Brazil Metro.
  - Call backs to respondents in these market reveal the mobile Internet addresses difficulties in home, office and public Internet access.

Incidence of using the mobile phone application daily or weekly – by country														
All figures in %	Sdn	HK	UK	Neth	Aust	Gmy	NZ	Kor	Frc	USA	Jpn	Rus	Brz	Chi	Ind
Messaging / Communication															
SMS	83	62	88	76	80	81	74	93	78	14	35	85	65	93	86
MMS - Pictures or photos	25	16	35	9	28	11	27	27	36	9	36	30	11	31	9
MMS - Video or audio	10	11	18	5	14	1	12	11	16	5	17	13	5	6	4
E-mail	6	6	13	6	12	10	15	7	17	13	82	13	24	5	5
Video conferencing	2	5	3	1	3	0	2	1	3	2	3	2	3	1	2
Imaging															
Camera for photography	33	40	48	23	37	27	34	61	43	21	42	28	13	25	12
Video camera	13	20	26	10	17	13	10	31	15	8	17	17	2	10	3
Entertainment															
MP3/Digital Music Player	14	23	18	10	10	9	6	26	10	4	10	21	22	12	9
Digital Media Player	6	12	9	3	7	1	5	6	7	4	5	7	2	4	6
Listen to live radio	4	13	11	8	13	2	8	3	5	2	3	11	4	7	22
Play games	11	38	36	17	36	15	38	44	25	22	25	54	39	61	53
Information															
Surf Internet, on-line portals	11	12	19	3	8	4	13	9	19	11	58	25	22	9	9
Sample Size	417	462	408	443	454	413	481	418	402	525	398	384	382	535	395

Base: All mobile phone users. *Note: Refer to Appendix for full wording of applications.*
Green cells indicate scores significantly higher than Global Average. Pink cells indicate scores significantly lower than Global Average.

4

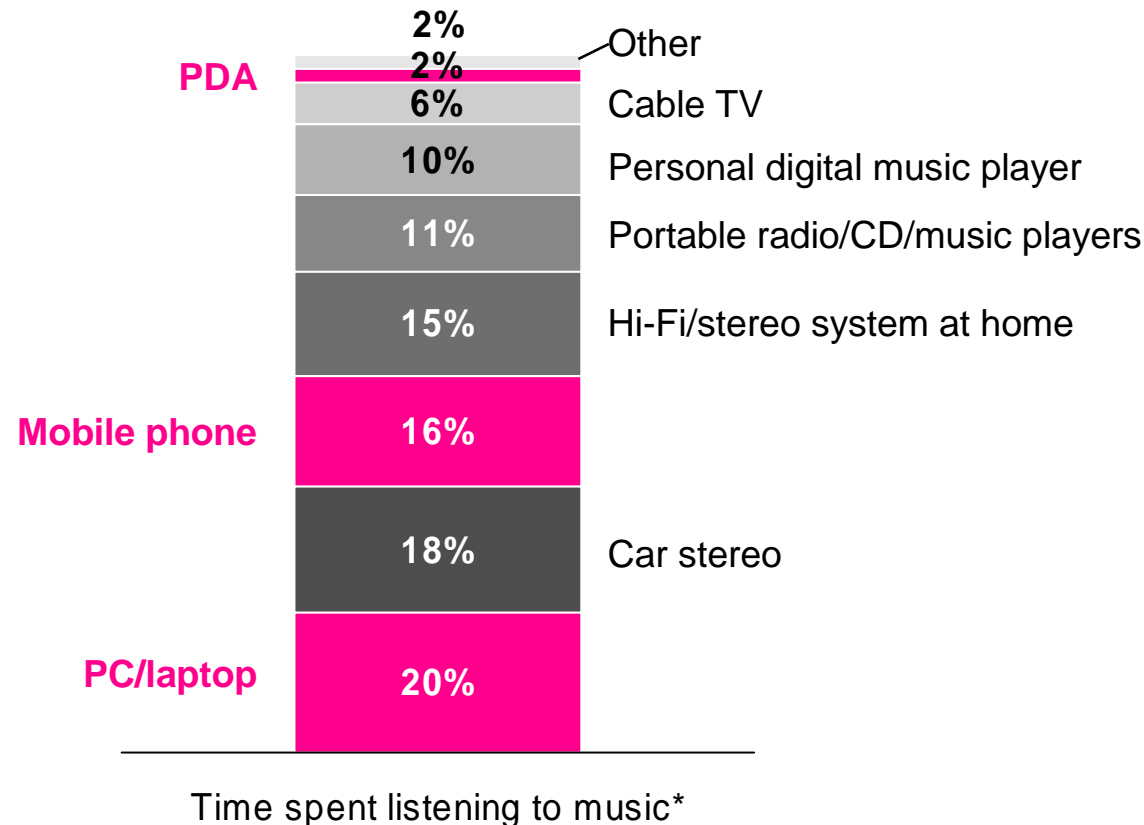# Mobile phone applications used frequently…cont'd

- Convenience applications are most regularly used in Sweden, UK, France and Russia, and are not regularly used in Asian markets like Japan, Korea, India and China. This is perhaps due to the alphabets and languages used in these markets.

- Productivity functions are most regularly used in the leading markets of Sweden, Korea and Japan.

- 3G is most regularly used in the UK, Korea and Japan. Mobile users in Sweden, France and Russia Metro most regularly use 2.5G.

Incidence of using the mobile phone application daily or weekly – by country															
All figures in %	Sdn	HK	UK	Neth	Aust	Gmy	NZ	Kor	Frc	USA	Jpn	Rus	Brz	Chi	Ind
Convenience															
Handwriting recognition	24	5	4	2	7	3	4	1	33	2	4	6	8	4	1
Voice commands	5	8	15	9	12	5	15	5	14	21	4	19	13	15	5
Productivity															
PDA functions	25	9	28	22	26	42	28	36	25	12	29	24	46	16	6
Microsoft Office	4	4	5	3	5	1	5	2	4	2	4	5	3	1	1
Sync with PDA or computer	15	12	13	11	9	14	8	19	13	4	3	20	2	6	3
Connect to work server	21	4	8	2	5	1	8	3	4	5	10	6	3	2	4
Connectivity															
Bluetooth/infrared	21	24	28	22	15	19	11	6	23	6	8	29	0	8	5
Wi-Fi/WLAN connectivity	3	2	4	2	2	1	2	10	3	3	4	4	-	3	1
WAP	20	7	26	6	12	2	16	8	21	3	58	23	11	4	3
GPRS/EDGE connectivity	19	10	23	7	11	4	7	5	21	4	-	23	1	12	10
3G/CDMA 2000 connectivity	6	5	8	1	6	2	4	11	3	3	11	3	0	1	1
Sample Size	*417*	*462*	*408*	*443*	*454*	*413*	*481*	*418*	*402*	*525*	*398*	*384*	*382*	*535*	*395*

Base: All mobile phone users. Note: Refer to Appendix for full wording of applications.
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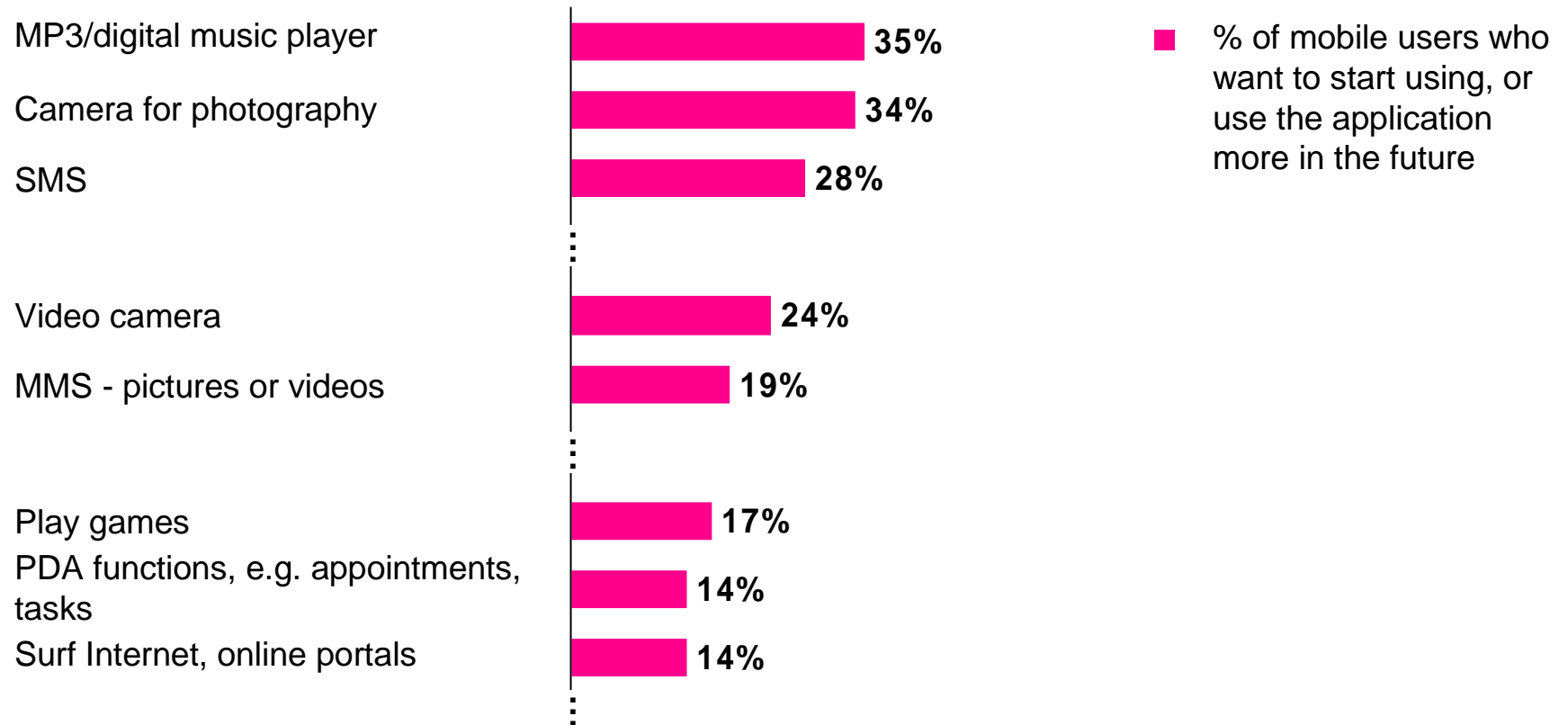
5

Time Spent Listening to Music – Split across Devices*

Beim Musikhören machen Computer, Handy und PDA den traditionellen Geräten bereits überraschend große Konkurrenz

PDA

2% — Other
2%
6% — Cable TV
10% — Personal digital music player
11% — Portable radio/CD/music players
15% — Hi-Fi/stereo system at home
Mobile phone **16%**
18% — Car stereo
PC/laptop **20%**

Time spent listening to music*

* All who have MP3/digital music player on their mobile phones or PDAs. n=1016

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Mobile Phone Popular in the Future
Dieser Trend scheint auch anzuhalten

Application	%
MP3/digital music player	**35%**
Camera for photography	**34%**
SMS	**28%**
Video camera	**24%**
MMS - pictures or videos	**19%**
Play games	**17%**
PDA functions, e.g. appointments, tasks	**14%**
Surf Internet, online portals	**14%**

■ % of mobile users who want to start using, or use the application more in the future

Base: All mobile phone users. n= 6517

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Mobile phone applications popular in the future – by country

- Mobile users in New Zealand, Korea, Sweden and Hong Kong are relatively more interested in using more applications in future.
  - In Hong Kong and Korea the interest is relatively more towards music and imaging.
  - In Sweden interest in applications is directed towards music, e-mailing and surfing the Internet.
  - In New Zealand interest is directed at applications satisfying different needs: music, imaging, MMS photos/pictures and e-mails

Mobile applications that mobile users want to start using, or use more of in the future – by country														
All figures in %	Sdn	HK	UK	Neth	Aust	Gmy	NZ	Kor	Frc	USA	Jpn	Rus	Brz	Chi	Ind
MP3 / Digital Music Player	46	42	39	34	39	37	40	60	44	19	27	23	33	29	26
Camera for photography	27	41	28	35	26	29	29	36	24	33	23	34	55	42	39
SMS	10	31	19	36	21	31	15	39	6	8	12	29	13	58	80
Listen to live radio	40	34	31	22	29	27	32	41	29	28	13	13	14	6	26
Video camera	17	32	25	17	25	12	30	33	31	19	14	32	36	26	16
MMS - Pictures or photos	23	15	22	19	21	17	28	16	15	17	23	21	13	25	13
E-mail	37	20	21	19	25	20	30	10	15	23	31	9	11	8	11
Play games	6	19	12	9	17	7	15	19	3	18	9	15	9	36	53
Bluetooth or infrared	16	27	22	25	20	20	17	17	15	10	10	16	6	9	5
PDA functions	13	12	10	15	11	18	9	23	8	13	13	10	24	17	11
Surf Internet, on-line portals	22	7	12	8	15	11	15	14	12	19	23	13	23	9	7
Sample Size	*417*	*462*	*408*	*443*	*454*	*413*	*481*	*418*	*402*	*525*	*398*	*384*	*382*	*535*	*395*

Base: All mobile phone users. Note: Refer to Appendix for full wording of applications.
Green cells indicate scores significantly higher than Global Average. Pink cells indicate scores significantly lower than Global Average.

continued overleaf….

Mobile phone applications popular in the future– by country …cont'd

- Mobile users in Germany, USA, Japan, Russia and India show relatively less enthusiasm towards using more applications in future.

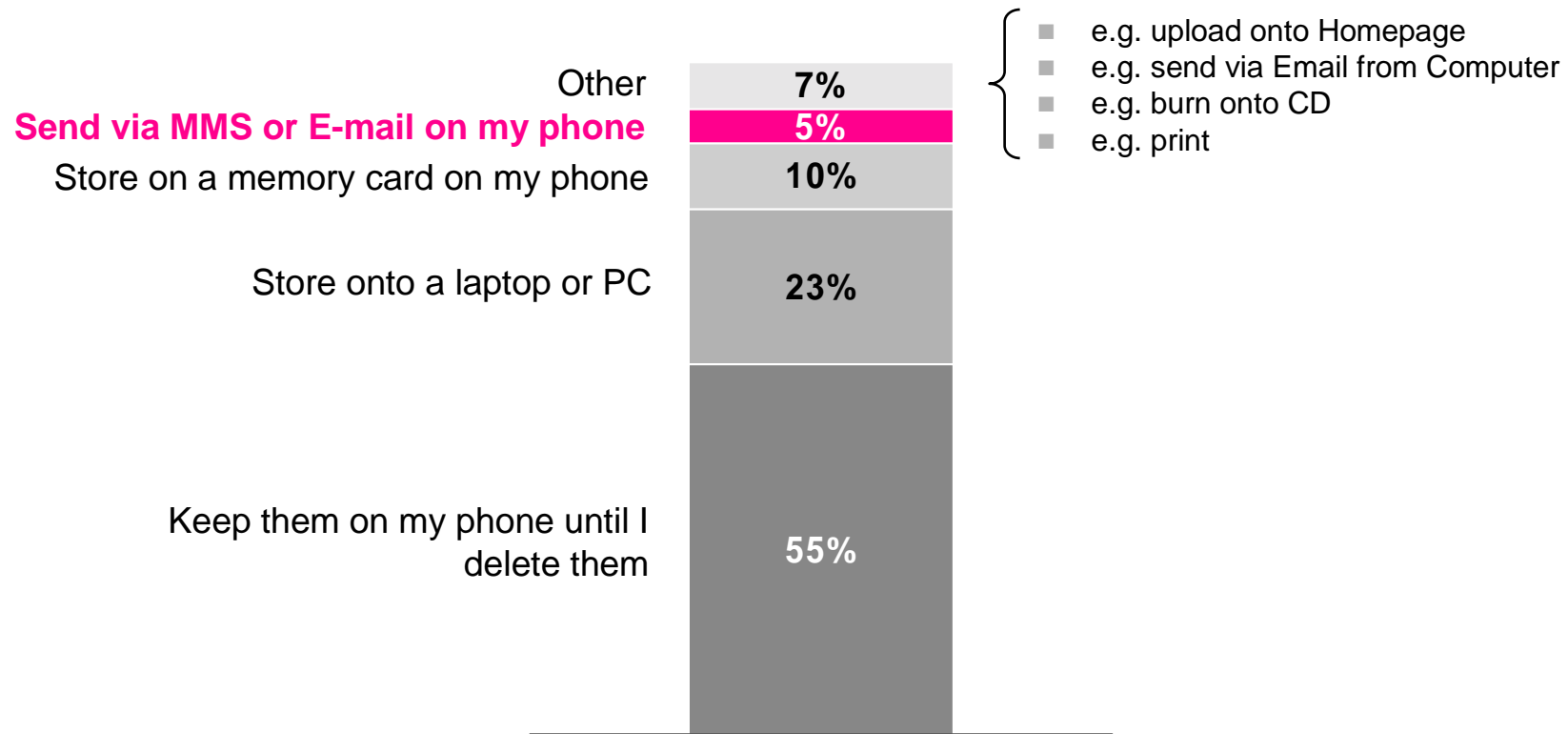| Mobile applications that mobile users want to start using, or use more of in the future – by country															
All figures in %	Sdn	HK	UK	Neth	Aust	Gmy	NZ	Kor	Frc	USA	Jpn	Rus	Brz	Chi	Ind
Microsoft Office	15	9	16	8	12	9	13	13	11	9	11	10	21	4	11
Digital Media Player	14	13	16	8	15	5	20	16	21	10	10	10	6	4	6
MMS - Video or audio	10	10	18	5	13	9	20	7	13	8	12	16	8	3	11
Voice commands	10	5	10	12	16	20	16	8	8	23	3	5	10	7	7
Video conferencing	7	20	8	10	12	6	14	23	12	6	9	7	3	2	6
Sync with PDA or computer	8	11	8	12	7	20	7	16	7	5	6	10	3	9	2
WAP	8	9	6	2	8	6	6	6	3	1	18	9	14	2	4
GPRS / EDGE connectivity	6	6	4	6	4	1	5	6	5	1	-	15	8	9	21
3G / CDMA 2000 connectivity	12	16	7	8	4	4	6	3	17	1	8	3	7	3	3
Handwriting recognition	7	14	8	2	9	15	11	12	4	3	5	5	2	4	7
Wi-Fi / WLAN connectivity	11	5	7	10	5	9	6	9	10	3	6	5	7	2	3
Connect to work server	10	4	7	5	6	4	8	8	3	6	4	5	6	1	3
Sample Size	417	462	408	443	454	413	481	418	402	525	398	384	382	535	395

Base: All mobile phone users. Note: Refer to Appendix for full wording of applications.
Green cells indicate scores significantly higher than Global Average. Pink cells indicate scores significantly lower than Global Average.

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Usage of Photos Taken on Mobile Phones

Aber Vorsicht vor zu viel Euphorie: Nutzung von Gerätefeatures generiert nicht unbedingt den gewünschten Umsatz für Netzbetreiber
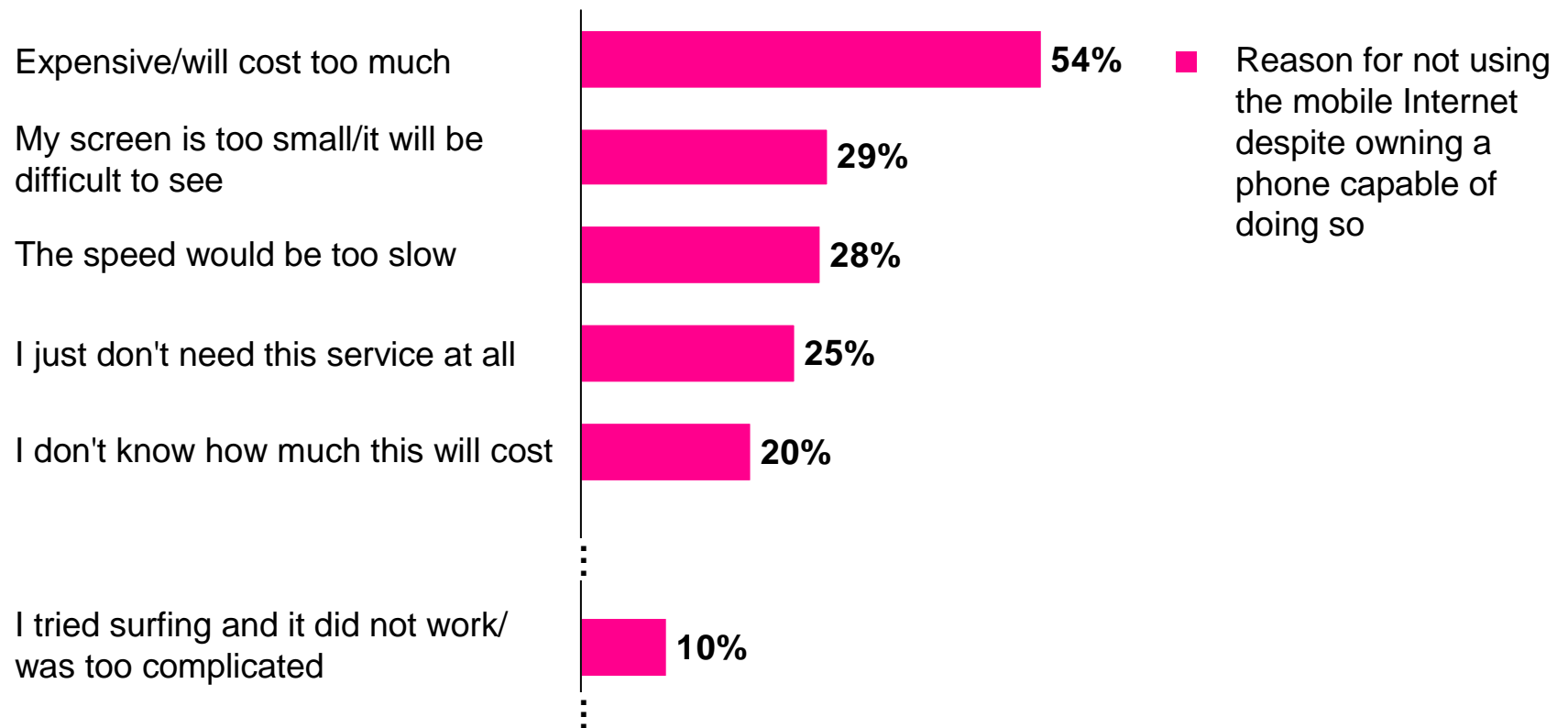
Other — 7%

Send via MMS or E-mail on my phone — 5%

Store on a memory card on my phone — 10%

Store onto a laptop or PC — 23%

Keep them on my phone until I delete them — 55%

- e.g. upload onto Homepage
- e.g. send via Email from Computer
- e.g. burn onto CD
- e.g. print

Main things done to photos

Base: mobile users who use the camera on their mobile phone. n=2.148

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Main Obstacles to Mobile Internet Adoption
Dabei gibt es auch noch viele Hemmnisse zu überwinden

Expensive/will cost too much — **54%**

My screen is too small/it will be difficult to see — **29%**

The speed would be too slow — **28%**

I just don't need this service at all — **25%**

I don't know how much this will cost — **20%**

I tried surfing and it did not work/ was too complicated — **10%**

■ Reason for not using the mobile Internet despite owning a phone capable of doing so

Base: Mobile users who have Wi-Fi/WAP/GPRS/Edge/3G on phones but do NOT surf the mobile Internet. n= 2263

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Main obstacles to mobile Internet adoption across countries

- Cost is a relatively bigger obstacle to adoption in Korea, Germany and Brazil Metro. These are three markets where most mobile phones are capable of supporting the mobile Internet but where take-up is low.

- Markets where poor perception of the service holds back adoption includes Sweden, Germany, Korea, USA and Japan. In these developed markets the mobile Internet may suffer from comparison to other wired and wireless broadband technologies available to consumers over a variety of devices.
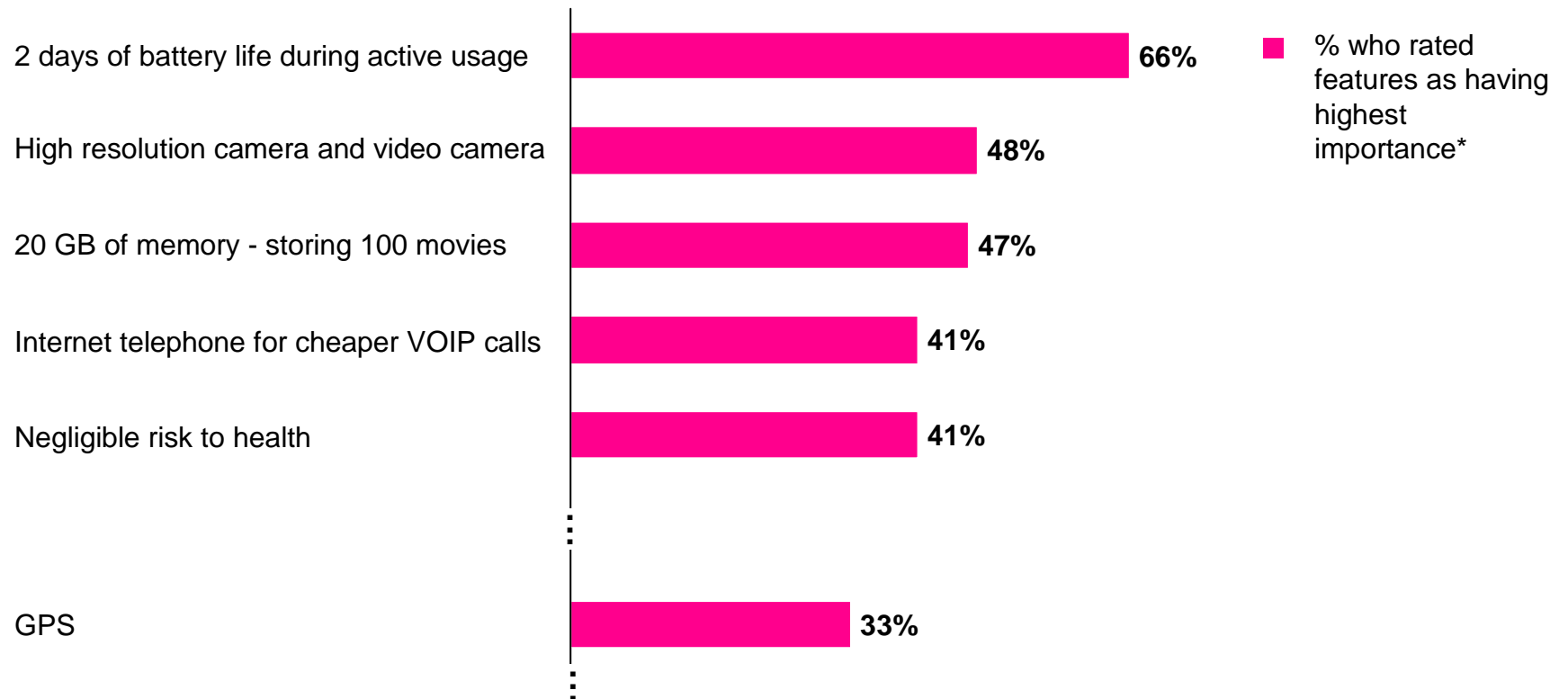
Most frequently cited obstacles to using the mobile Internet (multiple responses) – by country									
All figures in %s	Expen-sive	Screen too small	Speeds too slow	Just don't need	Don't know costs	Have not registered	Use up battery life	Not enough information	Tried surfing - complicated	Viruses
Sweden (n=174)	43	36	43	38	32	25	14	13	11	10
Hong Kong (n=195)	47	34	27	23	30	30	24	6	8	18
UK (n=156)	54	37	32	31	22	8	16	6	9	4
Netherlands (n=210)	61	16	19	30	6	13	3	7	7	3
Australia (n=175)	54	28	22	26	21	16	14	12	7	11
Germany (n=206)	81	52	41	38	19	19	7	17	13	7
New Zealand (n=157)	59	32	17	29	20	13	13	11	11	14
Korea (n=196)	74	44	45	12	43	4	33	13	12	3
France (n=165)	58	31	30	37	18	21	13	7	10	3
USA (n=44)	51	45	29	31	11	20	18	10	9	5
Japan (n=49)	59	49	33	20	20	4	24	14	4	10
Russia Metro (n=163)	23	12	12	32	9	20	10	12	4	6
Brazil Metro (n=76)	70	12	20	23	15	10	5	15	11	6
China Metro (n=203)	43	16	27	6	11	25	10	3	13	13
India Metro (n=94)	39	7	16	3	6	37	4	18	3	11

Base: mobile users who have Wi-Fi / WAP / GPRS / Edge / 3G on phones but do NOT surf the mobile Internet.
Green cells indicate scores significantly higher than Global Average. Pink cells indicate scores significantly lower than Global Average.

Key Features for the Ideal Converged Device

Bei näherem Hinsehen gibt es dann auch noch andere Hemmnisse

Feature	%
2 days of battery life during active usage	66%
High resolution camera and video camera	48%
20 GB of memory - storing 100 movies	47%
Internet telephone for cheaper VOIP calls	41%
Negligible risk to health	41%
GPS	33%

■ % who rated features as having highest importance*

* Importance rating on 18 features
Base: All respondents. n=6807

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Key features for the ideal converged device – by country

- Consumer hot buttons do differ between countries, emphasizing the importance of understanding local preferences in new product development.

  - Battery life is a particularly important issue to European and USA consumers.
  - Consumers in Hong Kong, Korea and France are most concerned about health risks.
  - Consumers in India and Northern Europe are keen for VOIP.
  - There is generally higher preference for GPS and PDA functions in Europe and USA.
  - The idea of biometric security features appeal particularly in Japan, UK and Australia.
  - Universal speech translators are definitely interesting in markets where English is not as widely spoken, including Russia, Brazil, China, Korea, France and Hong Kong and is of much less interest elsewhere.
  - Countries most interest in games with super graphics are China (by far), India and Japan.

Incidence of feature being rated as having Highest Importance – by country														
All figures in %	Sdn	HK	UK	Neth	Aust	Gmy	NZ	Kor	Frc	USA	Jpn	Rus	Brz	Chi	Ind
2 days of battery live during active usage	77	70	73	81	64	67	65	69	75	76	60	63	59	45	55
High resolution camera and video camera	60	62	61	48	51	39	58	44	58	50	43	44	46	39	30
20 GB of memory - storing 100 movies	46	48	55	47	50	46	51	53	46	41	39	47	40	50	41
Internet telephone for cheaper VOIP calls	34	37	36	53	39	51	36	33	42	32	45	42	42	43	55
Negligible risk to health	39	61	39	41	40	33	35	53	50	38	37	42	41	37	39
Full version of Microsoft Office applications	46	30	46	44	42	46	39	17	39	42	39	47	37	40	42
GPS	41	18	35	46	32	52	27	33	46	40	33	20	14	29	26
PDA functions e.g. Appointments, Tasks	37	24	30	45	35	51	30	25	27	38	31	20	35	31	29
Sample Sizes	*419*	*463*	*411*	*444*	*473*	*415*	*495*	*426*	*406*	*611*	*400*	*410*	*431*	*599*	*404*

Base : All respondents. Note: Refer to Appendix for full wording of applications.
Green cells indicate scores significantly higher than Global Average. Pink cells indicate scores significantly lower than Global Average.

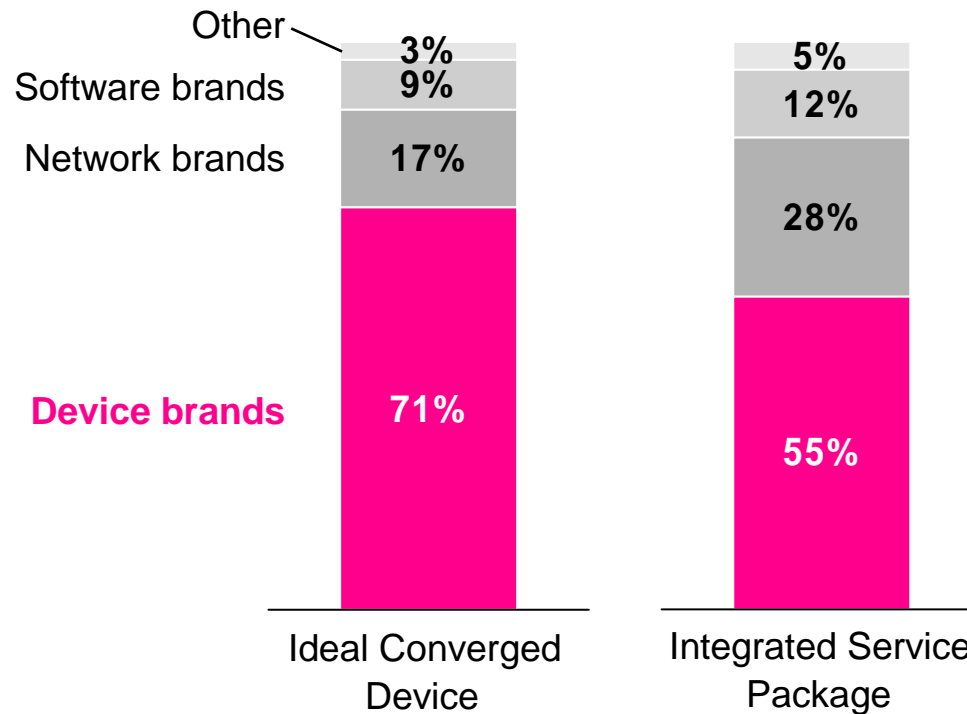# Key features for the ideal converged device – by country…cont'd

Incidence of feature being rated as having Highest Importance – by country														
All figures in %	Sdn	HK	UK	Neth	Aust	Gmy	NZ	Kor	Frc	USA	Jpn	Rus	Brz	Chi	Ind
LCD which rolls/folds out to 30cmx30cm	36	34	31	26	30	33	35	36	29	29	29	40	24	34	29
Biometric security features	23	29	35	23	35	28	28	31	24	32	42	20	28	27	20
Live TV and Video/Audio On Demand	24	23	30	14	27	15	32	32	23	27	35	27	30	24	37
Gaming features with super graphics	17	38	19	13	24	20	28	20	15	23	31	23	30	43	35
Universal foreign speech translator	17	30	14	14	15	24	14	43	35	13	26	45	33	38	20
Video conferencing facility	21	23	21	14	29	10	29	21	31	19	17	24	53	28	34
Surround speakers for high quality audio	17	29	24	18	27	18	28	22	24	24	30	24	18	32	43
Features to control home and car from afar	30	12	21	26	22	25	19	32	15	29	24	30	30	12	25
Holographic, roll out or fold out keyboard	24	14	21	31	21	26	25	23	11	23	22	26	16	25	20
Advanced voice commands & transcription	11	18	9	16	17	19	22	13	11	24	17	15	24	24	20
Sample Sizes	419	463	411	444	473	415	495	426	406	611	400	410	431	599	404

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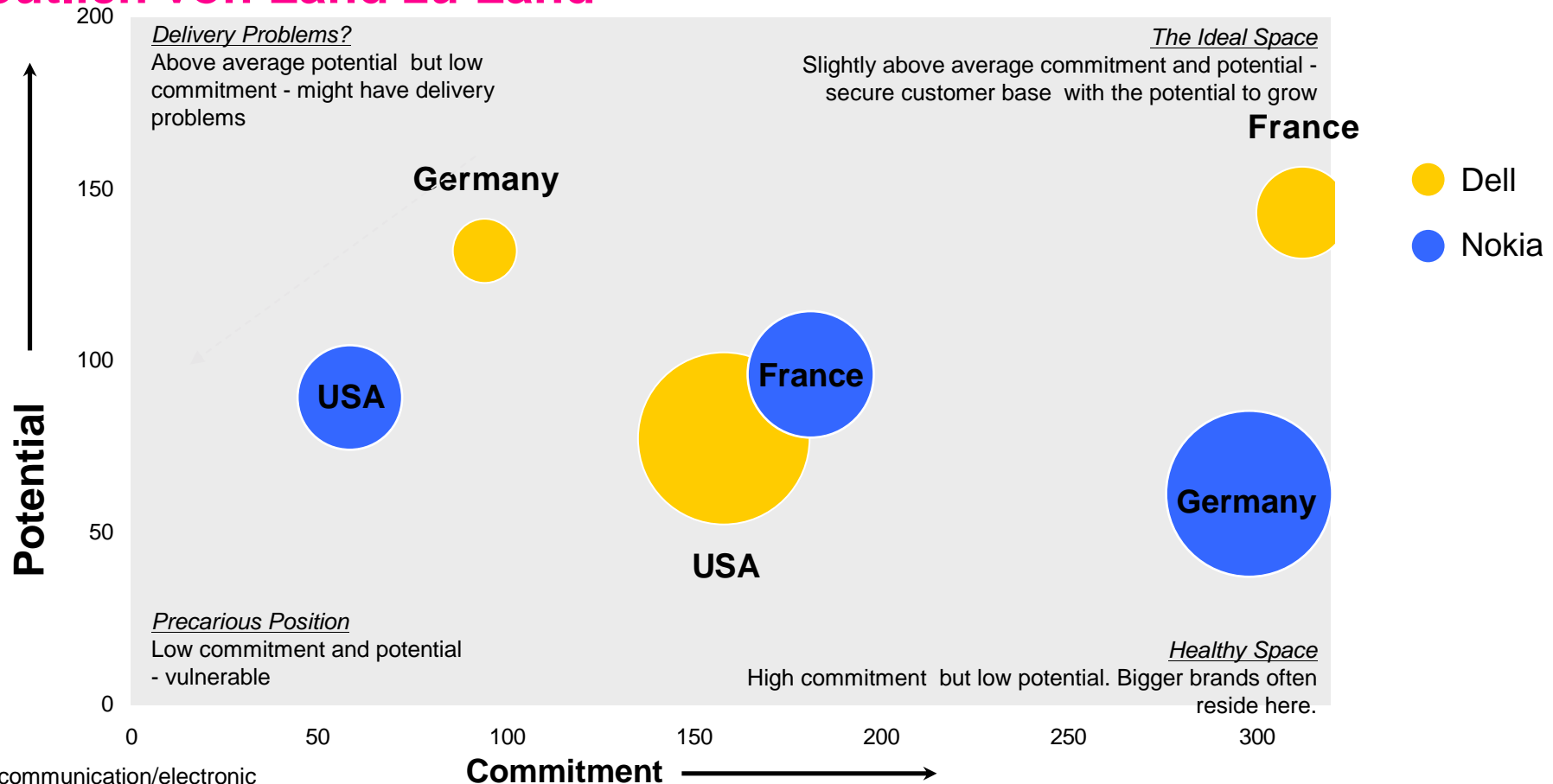
Favoroured Providers

Als ideale Anbieter der künftigen Alles-Könner werden Geräte-hersteller klar bevorzugt

Other — 3%

Software brands — 9%

Network brands — 17%

Device brands — 71%

5%

12%

28%

55%

Ideal Converged Device

Integrated Service Package

* The Ideal Converged Device as part of a package which includes the device itself, software, sophisticated applications, high speed connections and customer service
Base: All respondents. n=6807

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Positioning of ICE* Brands – Dell

Auch bezüglich Markenwahrnehmung divergieren die Ansichten deutlich von Land zu Land

Delivery Problems?
Above average potential but low commitment - might have delivery problems

The Ideal Space
Slightly above average commitment and potential - secure customer base with the potential to grow

Precarious Position
Low commitment and potential - vulnerable

Healthy Space
High commitment but low potential. Bigger brands often reside here.

Potential

Commitment

Dell
Nokia

France
Germany
USA

* IT/communication/electronic
Note: bubble size represents penetration

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Backup

What do the Global GTI Results look like?

An easy to use Powerpoint report containing the results and analysis for all 15 markets

- A report features an incisive Management Summary discussing key findings and recommendations

- The report covers all topics across each of the 15 markets

- Additionally, for the most critical topics, the report contains analysis drilling down into

  - Youths

  - Early adopters

  - High value customers

  - Other relevant demographics

- Optionally detailed Excel data tables and raw data are available to interested parties

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Market averages

Example:	Users	Committed	Uncommitted	Open	Unavailable	Total
Brand A	**692**	242	450	78	96	866
Brand B	**234**	69	165	242	398	866
…						
Brand n	**61**	0	61	69	736	866
Totals	**2720**	624	2096	1256	3828	

Average Committed =

$$\frac{\textbf{Sum of all committed users (across all brands in the market)}}{\textbf{Sum of all users (across all brands in the market)}}$$

=

$$\frac{\textbf{(Committed brand A users) + (Committed brand B users) + … + (Committed brand n users)}}{\textbf{(Users of brand A) + (users of brand B) + … + (users of brand n)}}$$

Example: (242 + 69 + … + 0) / (692 + 234 + … + 61) = 624 / 2720 = **0.23**

Average Availability =

$$\frac{\textbf{Sum of all open (across all brands in the market)}}{\textbf{Sum of all non-users (across all brands in the market)}}$$

Example: (78 + 242 + … + 69) / (174 + 640 + … + 805) = 1256 / 5084 = **0.25**

Average Potential =

$$\frac{\textbf{Sum of all open (across all brands in the market)}}{\textbf{(Sum of all uncommitted) + (sum of all open)}}$$

Example: (78 + 242 + … + 69) / ((450 + 165 + … + 61) + (78 + 242 + … + 69)= 1256 / 3352 = **0.37**

The averages are weighted averages, so that small brands don't skew the average
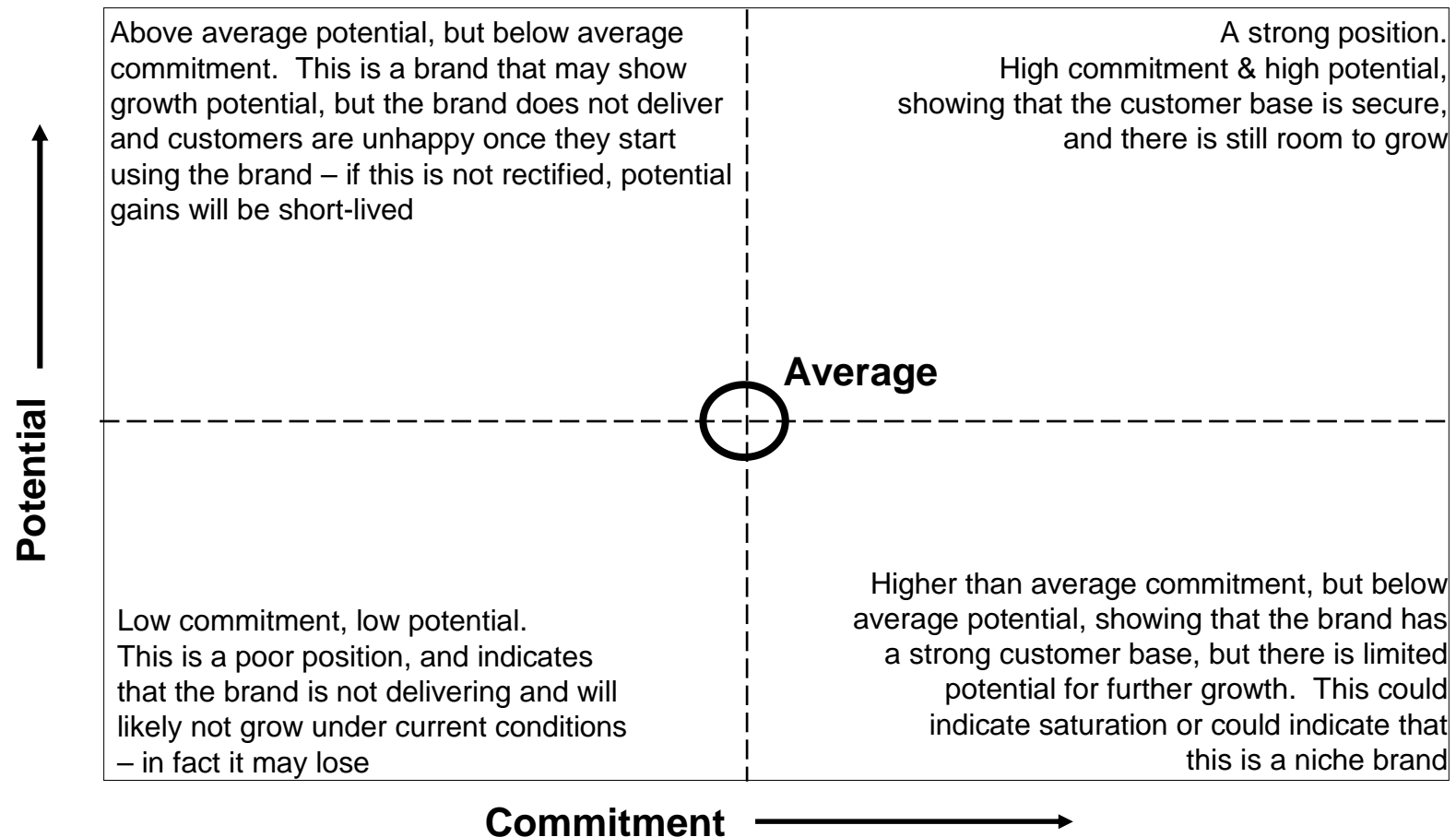
Brand health indices

The commitment, availability & potential indices are calculated as follows:

% committed = committed users/total users

% attracted = open non-users/total non-users

% potential = open non-users/(open + uncommitted)

Use raw scores

Commitment Index $= \dfrac{\%\ \text{committed for brand A}}{\text{Average }\%\text{ committed}} \times 100$

Availability Index $= \dfrac{\%\ \text{attracted to brand A}}{\text{Average }\%\text{ attracted}} \times 100$

Potential Index $= \dfrac{\%\ \text{potential for brand A}}{\text{Average }\%\text{ potential}} \times 100$

See appendix for calculation of averages

Conversion Model™ brand health bubble map

Above average potential, but below average commitment. This is a brand that may show growth potential, but the brand does not deliver and customers are unhappy once they start using the brand – if this is not rectified, potential gains will be short-lived

A strong position.
High commitment & high potential, showing that the customer base is secure, and there is still room to grow

Average

Potential

Low commitment, low potential.
This is a poor position, and indicates that the brand is not delivering and will likely not grow under current conditions – in fact it may lose

Higher than average commitment, but below average potential, showing that the brand has a strong customer base, but there is limited potential for further growth. This could indicate saturation or could indicate that this is a niche brand

Commitment ⟶

Note: This is simply a graphic representation of the Commitment Index & Potential Index from the brand health chart
        The size of the bubble indicates market penetration/brand usage