

- Introduction to the analysis and reporting features
- Measuring and benchmarking seasonality
- Comparing the guest mix of destinations
- Market volume and growth analysis (,Portfolio A.‘)
- Shopping barometer (ECM)
- **Webanalytics**
- Analysis of tourism intensity
- Visitors to attractions and sites
- **MyTourMIS**
- **Travel Distance Estimator**
- Outlook (possible developments for the next years)
 - **MICE database**
- Summary and feedback

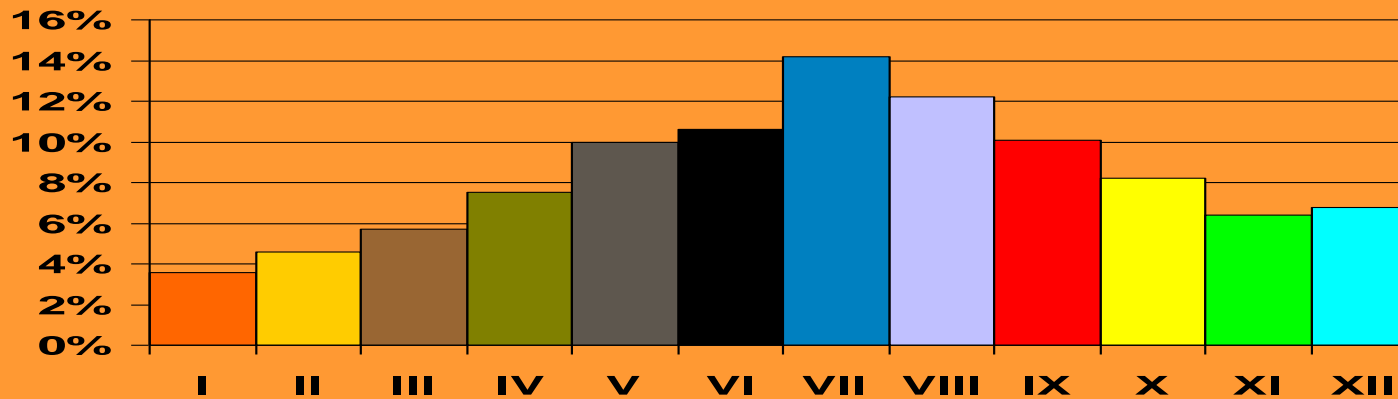
Introduction to the analysis and reporting features

Measuring and comparing seasonality in European destinations

- **Seasonality: The systematic intra-year variation in visitation caused by exogenous factors:**
 - Natural (e.g. climate)
 - Institutional
 - caused by the markets of origin (e.g. timing of school holidays)
 - caused by the destination (e.g. regular mega-events)
 - Calendar effects (e.g. Easter)
- **Problems:**
 - The need to **optimize the use of tourism infrastructure** such as roads to accommodate high flows during certain periods
 - Seasonality **increases the risk of high unemployment** during the low seasons
 - In dryer regions the issue of **water scarcity** is of particular concern

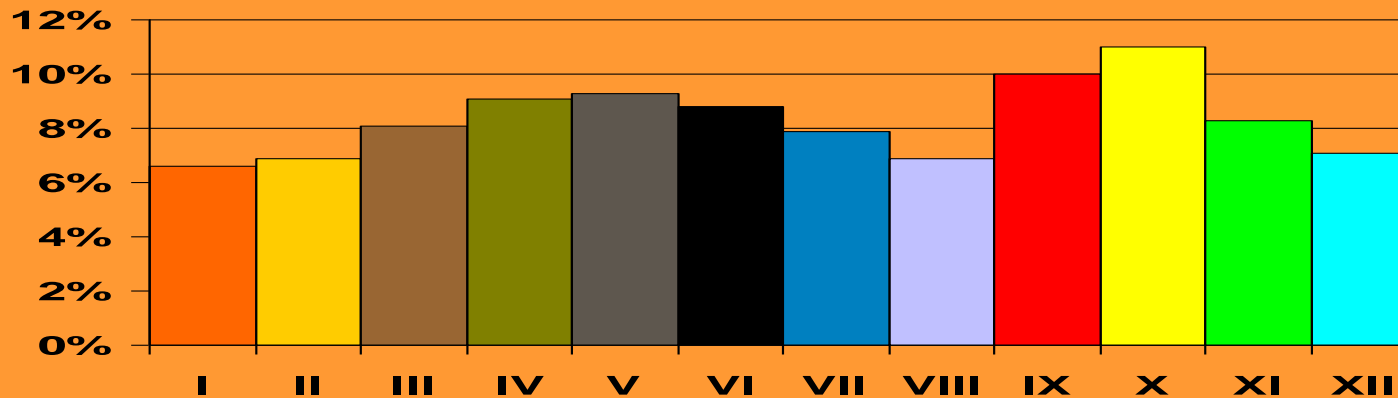
- **Product**
 - Development of new offers, events, packages, ...
- **Pricing**
 - Providing discounts for periods with less demand
- **Promotion**
 - When and how intensively we will promote the tourism products
- **Placement**
 - Which geographic region/market should be promoted
 - Which segments (e.g. young adults, families, business people)

Gini coefficient



LÜBECK

Gini=0.207



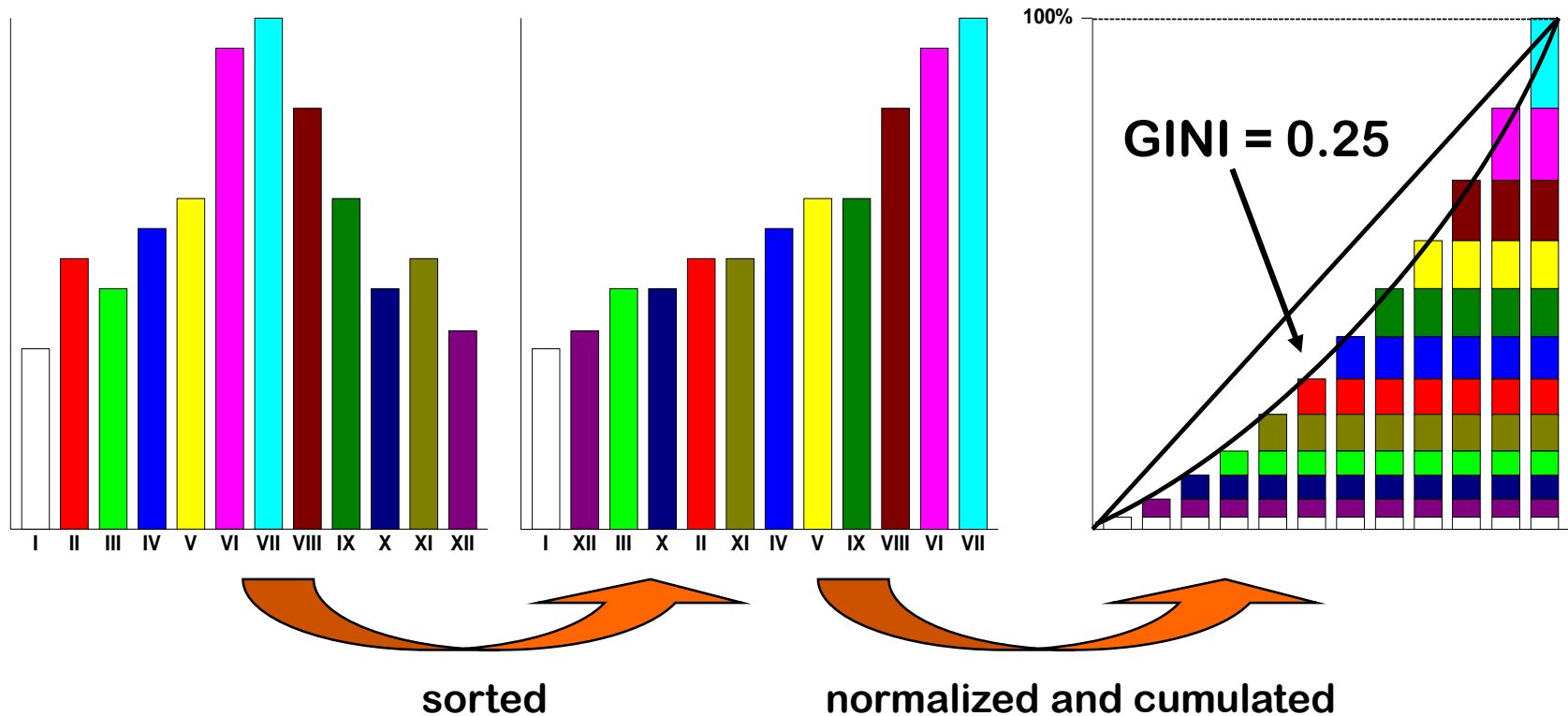
MADRID

Gini=0.088

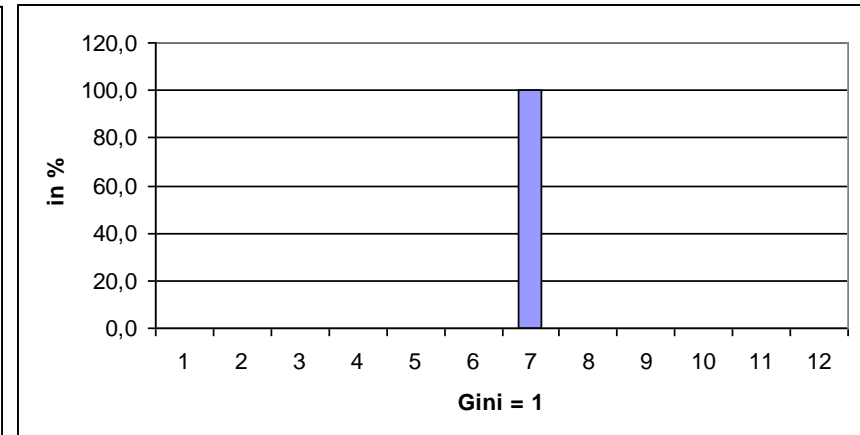
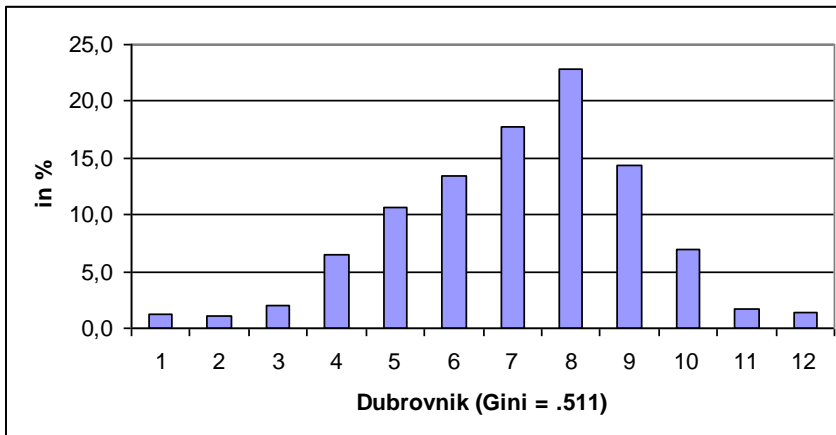
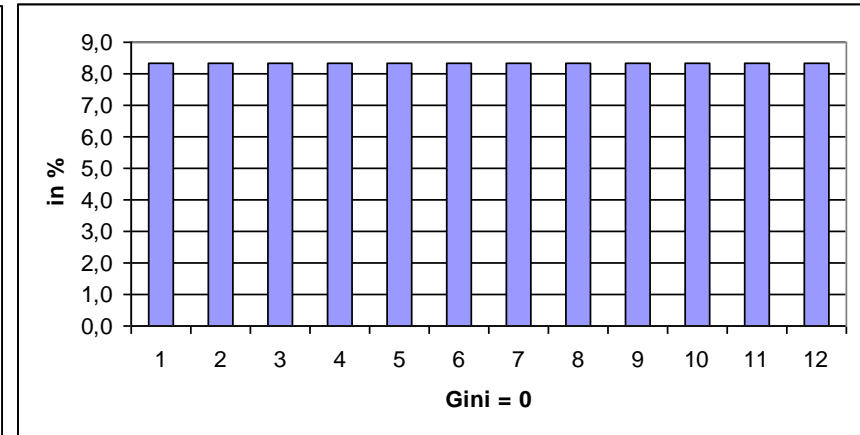
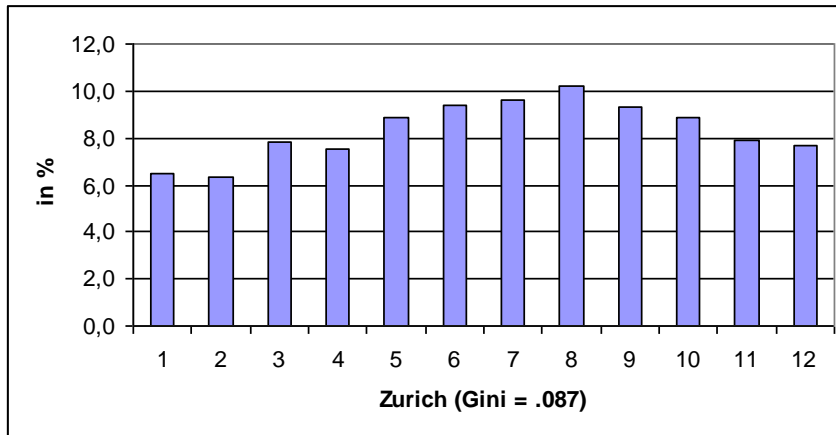
The Gini coefficient

Measure of statistical dispersion. The Gini can be approximated

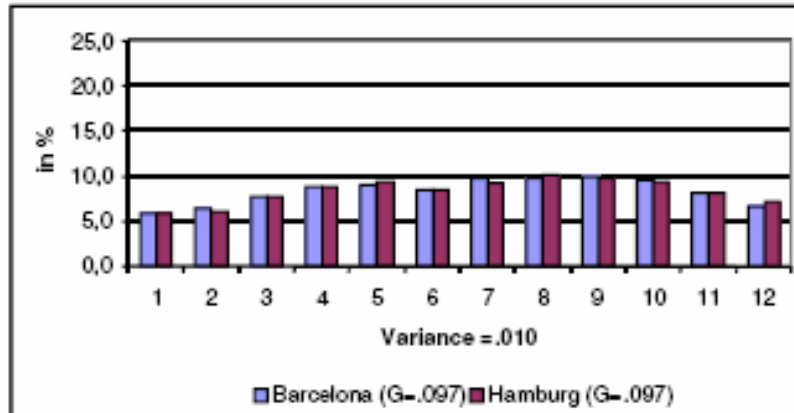
with trapezoids:
$$G^* = 1 - \sum_{i=1}^{12} (X_i - X_{i-1}) \times (Y_i + Y_{i-1})$$



Measuring seasonality (Gini coefficient)

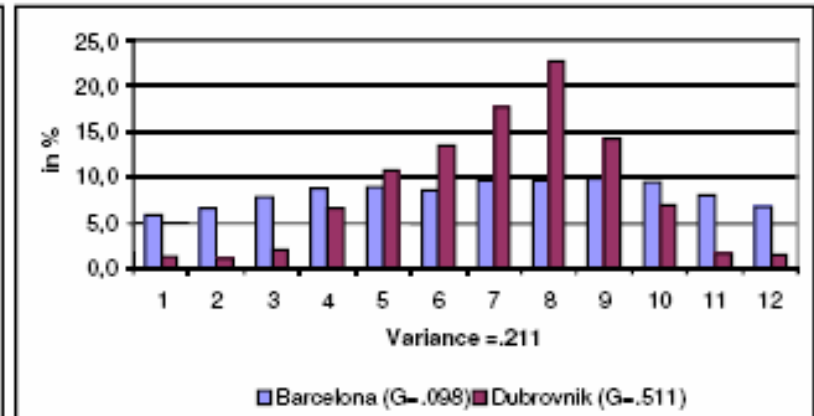
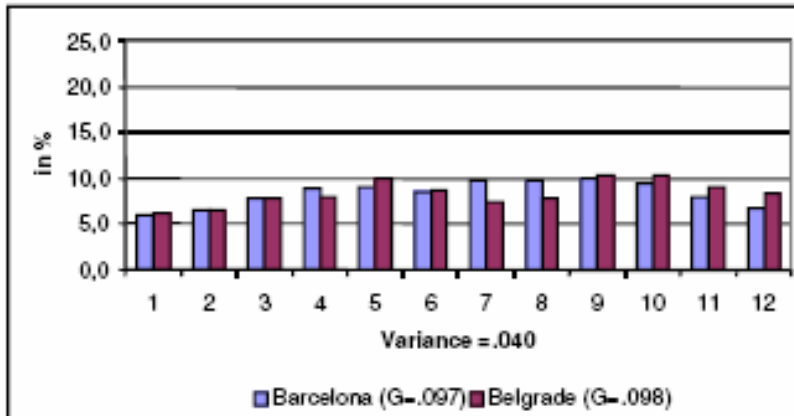


Similarity of seasonal patterns



$$d = \sqrt{\sum_{i=1}^{12} (x_i - y_i)^2}$$

Similarity of seasonal patterns of two destinations. Multiple destinations?

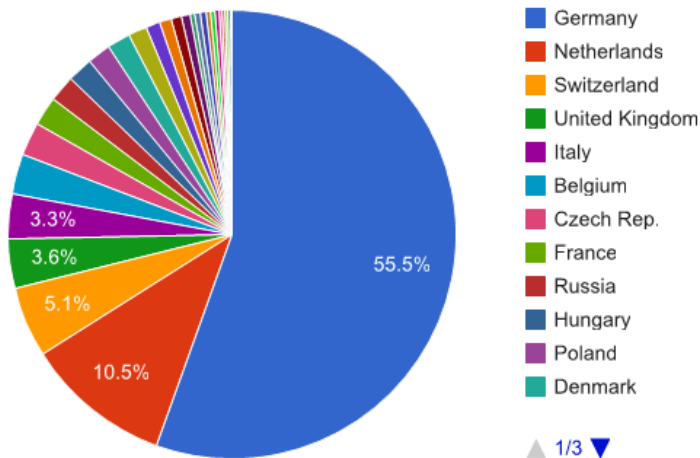


Comparing the guest mix of destinations

Diversity of guest mix

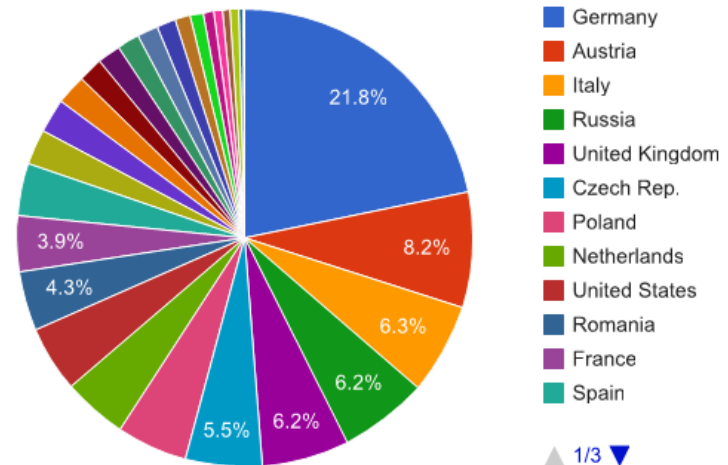
Assumption: A high diversity of guest mix spreads the risk of negative economic developments in single markets

Average length of stay of a market in all ETC destinations - Bednights
(preferred definition) 2012



Austria (Gini = 0.792)

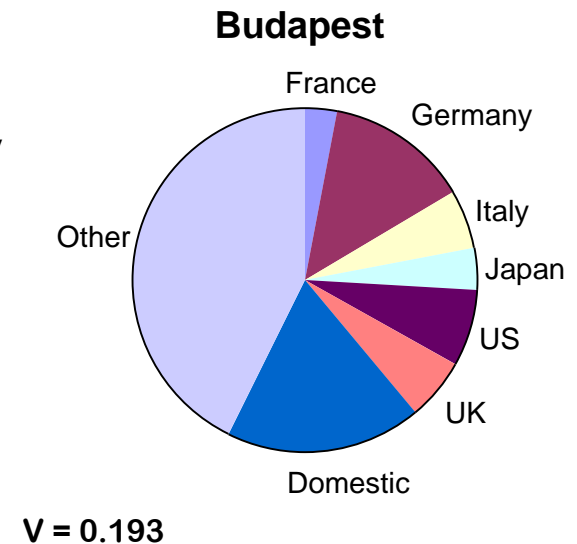
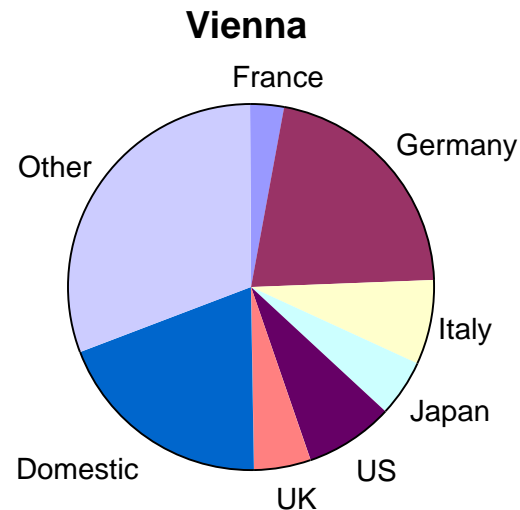
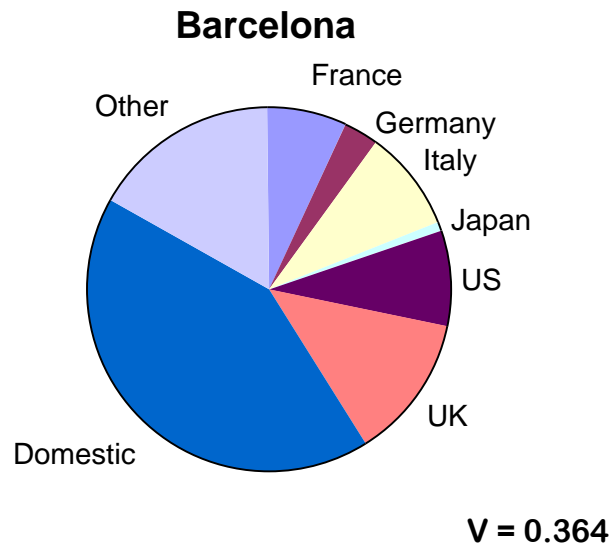
Average length of stay of a market in all ETC destinations - Bednights
(preferred definition) 2012



Hungary (Gini = 0.525)

Analyzing the similarity of guest mix

Assumption: The comparison (variance) of guest mix shares defines a destination's exposure to interregional competition



Market volume and market growth analysis & Portfolio visualization

To find the right (optimal) mix of target markets

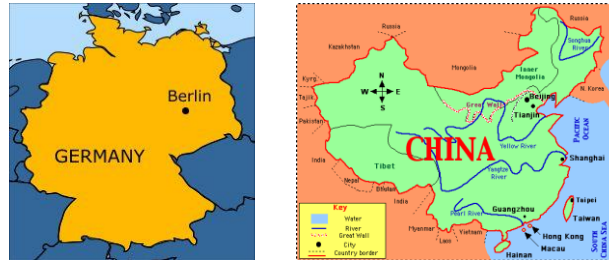
Implications for strategic (long-term) decisions and for the budget allocation process (e.g. where should we invest?)

2 basic questions:

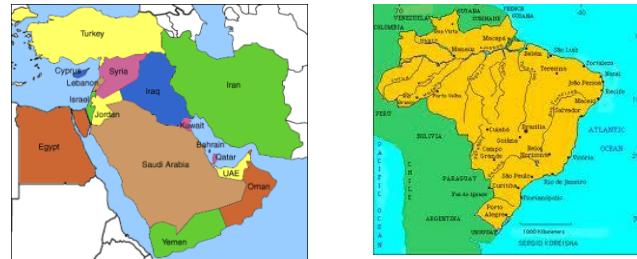
- What makes a market attractive?
- What are our chances in attracting visitors from a particular market?

What makes a market attractive?

1. Size/volume



2. Growth/Prospects



- **Market volume and market growth indicators**
 - # of travellers/arrivals/bednights or spendings
 - either measured at the country of origin (source market) or in all destinations (e.g. total bednights in all destinations)

What are our chances in attracting visitors from a particular market?

„Market chance indicators“

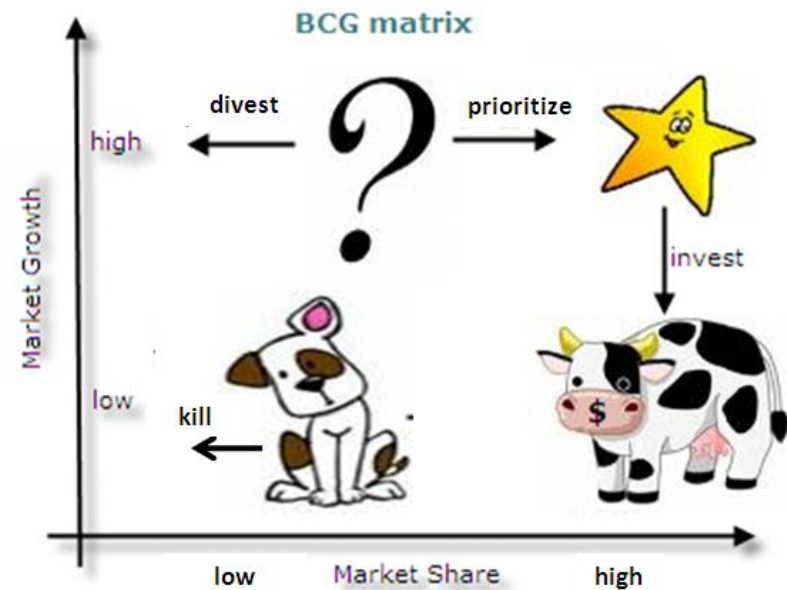
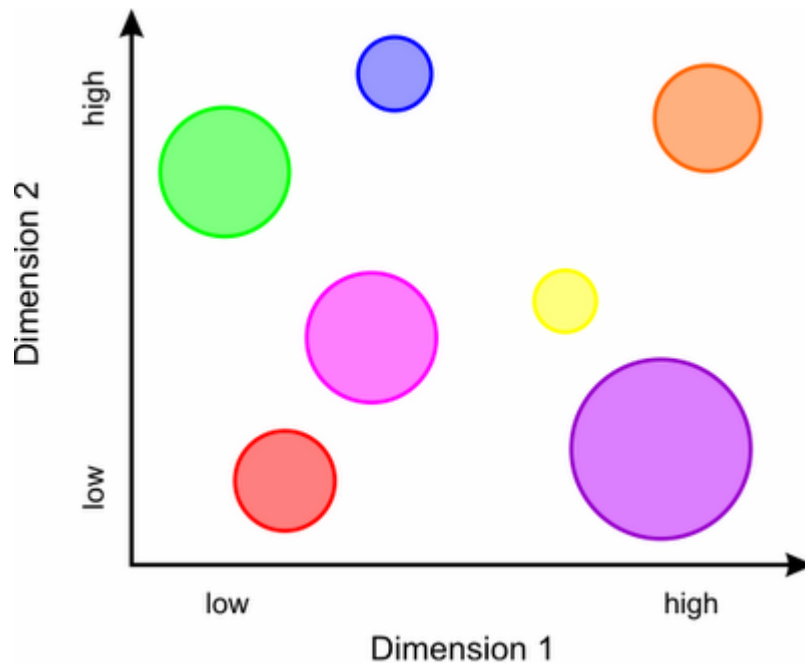
- **Destination awareness**
 - Knowledge, preference and sympathy towards a destination
- **Relative price level**
 - Comparison between prices of tourism goods and travel budget of travellers
- **Level of distribution**
 - Availability of a destination within the generating country's distributional system of tour operators and travel agents and online reservation systems
- **Competitive pressure**
 - Advertising budget invested by all competitors in a market
- **Travel distance**
 - Average financial input to cover travel distance

Strategic Key Performance Indicators

- **Market volume** is an absolute number describing the volume of tourism generated by a particular market
- **Market growth rate** is the percentage change of the market volume (in %)
- **Absolute market share** is the ratio when comparing the performance of a particular destination with the overall market volume (in %)
- **Relative market share** is the ratio of the market share of a particular destination compared to the market share of the leading destination (or the second best destination if the destination of evaluation is the market leader)
- **Guest mix share (= importance value)** is the proportion of bednights sold of a particular market compared to the overall number of bednights recorded in a tourism destination (in %)

Market growth-share matrix

Visualization



Examples on TourMIS

„Market volumes and shares of selected destinations“

- **Regional Level**
 - Portfolio analysis of Austrian provinces
- **City Level**
 - Portfolio analysis of cities in Europe
- **National Level**
 - Portfolio analysis of countries in Europe

The ECM Shopping Barometer

- **Objective**

- To shed light on the costs differential existing across cities in Europe, collecting publicly available data for a specific set of items among those commonly consumed by visitors.
- The final goal of the project is to rank destinations according to their costliness and to gain a deeper insight on visitors' perception of their experience in a city.

- **Problems**

- What prices to collect?
- Comparability of services and a prices

- **Sample size**

- 2012: 10; 2013: 38; 2014: 32; 2015: 16; 2016: 8

- **Guidelines (Manual) – Prices should:**
 - reflect the final price (i.e. include VAT and eventual tourists taxes)
 - refer to the regular price for individual's consumption (discounts for groups or special categories are not considered)
 - are collected from businesses in the city center
 - are collected in the local currency (converted into Euro)
 - are collected at a specific time of the year, but refer to a one-year period
- **The shopping bundle covers the main service categories required by tourists at the destination**

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The ECM shopping barometer

16 items

Local transport	Taxi from airport to city centre (1 person including luggage)	If the city has more than one airport, the researcher has to select the airport recognized as the one where the majority of international guests arrive. The name of the airport has to be specified in the notes.
	Train from airport to city centre (1 ticket, 2nd class) OR public transport bus from the airport to the city center (1 ticket, regular)	
	1 day ticket for the local public transport	
Food and Beverage	Price for a business lunch of 3 courses, no drinks, in the restaurant of a 4-star hotel in the city centre	The restaurant can be part of one of the hotels contacted for the room rates.
	Price for a dinner of 3 courses, no drinks, in the restaurant of a 4-star hotel in the city centre	
	Price of a classic pizza, Margherita with 2 toppings, for 1 person	Price collected at a Pizza Hut in the city centre
	A Coke, 0,33 l, in a Pizza Hut restaurant in the city centre	If a 0,33 l Coke is not available, the price should refer to a medium size Coke (or other soft-drink).
	A Beer, 0,33 l, in a Pizza Hut restaurant in the city centre	If a 0,33 l beer is not available, the price should refer to a medium size beer.
	Big Mac meal at McDonalds in the city center	The price refers to a Big Mac menu, including 1 Big Mac, french fries and one drink at a regular price (no special offers)
	Espresso in the lobby bar of a 4-star hotel	The bar can be part of one of the hotels contacted for the room rates.
Entertainment	Regular price for 1 ticket for the opera, 1 adult, no reductions.	The opera should be a classical piece. The seat should be in the parterre, 5th row in the middle.
	Regular price for 1 ticket for a classical concert, 1 adult, no reductions.	
	Regular price for the entrance to the biggest/main museum (permanent collection), for 1 adult, no reductions.	The seat should be in the parterre, 5th row in the middle. If the concert takes place in different venues, select the price which represents the average between the different venues.
	Regular price of 1 ticket for the hop-on hop-off sightseeing bus, 1 adult, no reductions	The price should refer to the regular entrance fee and should not be collected on days with special offers.
	Zoo, entrance of 1 adult, no reductions.	If the hop-on hop-off bus is not available, another similar sightseeing tour (e.g. tourist train) can be used and specified in the notes. If the zoo is not available a similar attraction can be used (e.g. Tropicario, Mini Europe).

Webanalytics

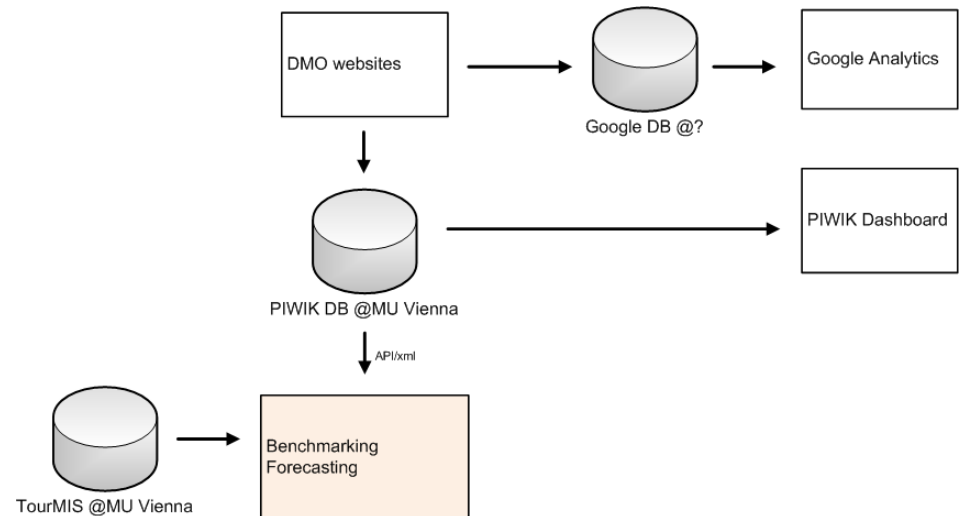
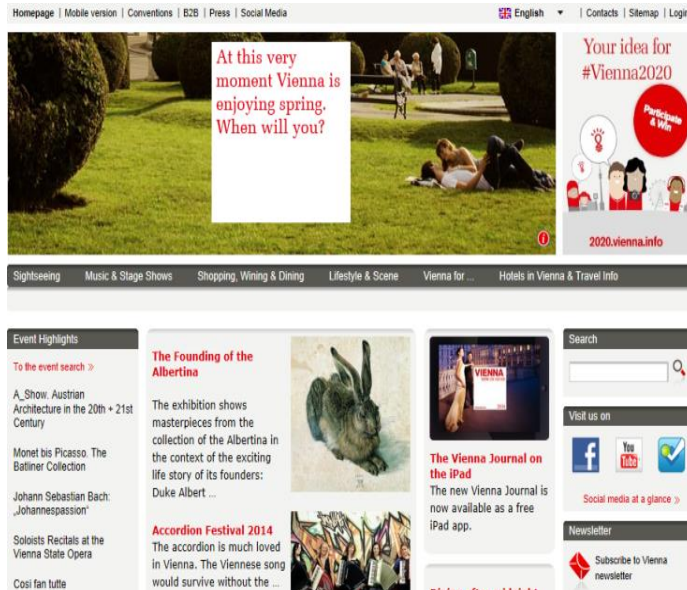
Allow insight into:

- Who is using your website?
- What are your visitors looking for?
- Where are users coming from and going to before and after visiting your website?
- When and how long has the website been accessed?

Most commonly used tools:

- Google Analytics, PIWIK (javascript tagging of pages in real-time)

Example: Vienna tourism website



<!-- Piwik -->

< script type="text/javascript">

var pkBaseURL = (("https:" == document.location.protocol) ? "https://survey.modul.ac.at/piwikAnalytics/" :

"http://survey.modul.ac.at/piwikAnalytics/");

document.write(unescape("%3Cscript src='" + pkBaseURL + "piwik.js' type='text/javascript'%3E%3C/script%3E"));

< /script><script type="text/javascript">

try {

var piwikTracker = Piwik.getTracker(pkBaseURL + "piwik.php", 3);

piwikTracker.trackPageView();

piwikTracker.enableLinkTracking();

} catch(err) {}

< /script><noscript><p></p></noscript>

<!-- End Piwik Tracking Code -->

- Number of unique, new, and returning visitors (identified by IP address)
- Number of visits
 - If a visitor comes to a website for the first time, or if he visits a page more than 30 minutes after his last page view, this will be recorded as a new visit
 - A unique visitor can make multiple visits per day
 - In the first visit, the visitor is a new visitor
 - From the second visit (the same day or later), a unique visitor is a returning visitor
- Duration of visit
- Number of page views

- **Count of visitors by country**
 - **“Geolocation” = looking up the visitor’s IP address in one of the online available GeoIP databases (e.g. MaxMind) or guessing a visitor’s location based on the language (browser setting) he/she uses (99.8% accurate at the country and 90% accurate at the region level)**
- **Number and site that external visitors came from (referrer)**
- **Search engines used to find site**
- **Keywords used in the search engines**
- **Browsers and devices used by visitors**

- **Visit location**
 - city, continent, country, region
- **Visit**
 - browser, browser version, device type, operating system, resolution, visitor type (new, returning)
- **Referrers**
 - Keyword, name, type (direct, search, website, campaign)
- **Metrics**
 - Days since first/last visit, number of visits/actions/events, visit duration

Defining a valuable visitor

Segmentation		Visits	Visitors (Unique)	Non bouncing visitors	Standard visitors	Highly engaged visitors
	Time on site		Important for KPIs	> 10 sec	> 90 sec	> 150 sec
	Pages/visit			> 1	> 2	> 3

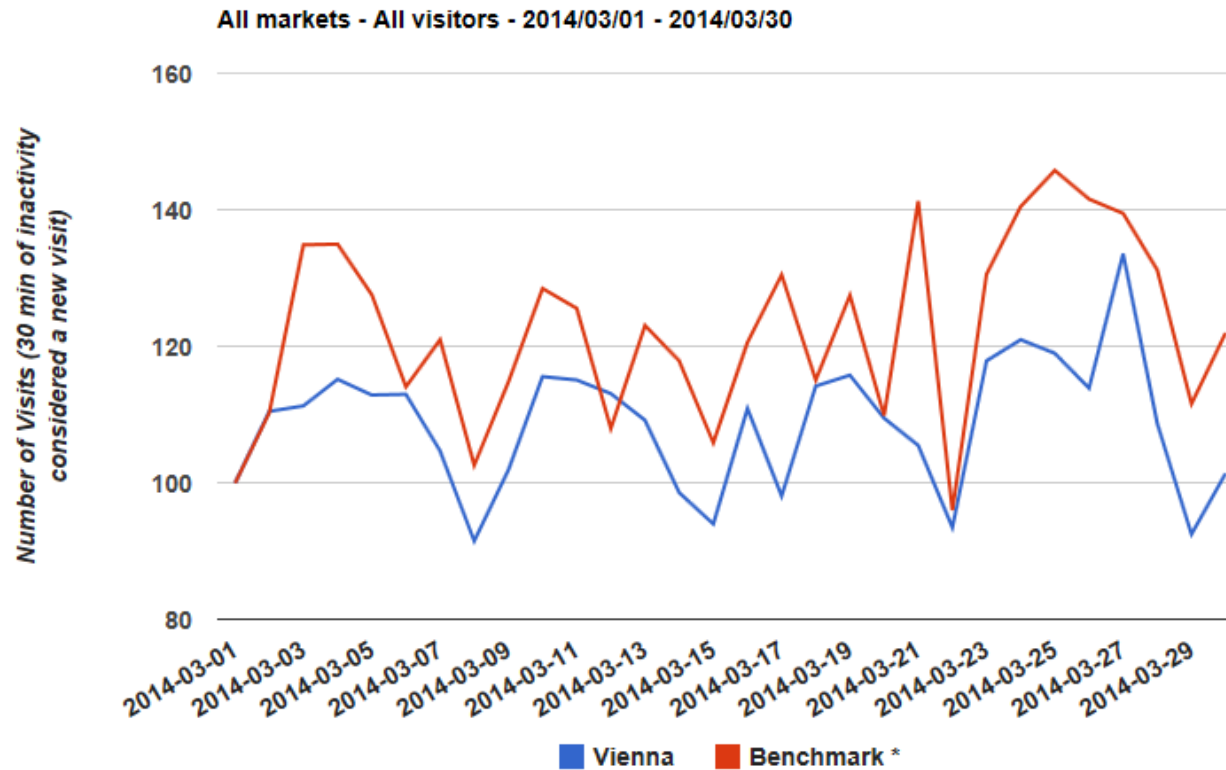
- Goal: Transforming data into valuable information
- Benchmarking

- **Number of visits**
- **Number of actions (page views, outlinks, downloads)**
- **Average time spent on site (in seconds)**
- **Number of visits that bounced (viewed one page)**
- **Maximum number of actions in a visit**
- **Ratio of visitors leaving the website after landing on the page**
- **Number of actions per visit**

TourMIS Example

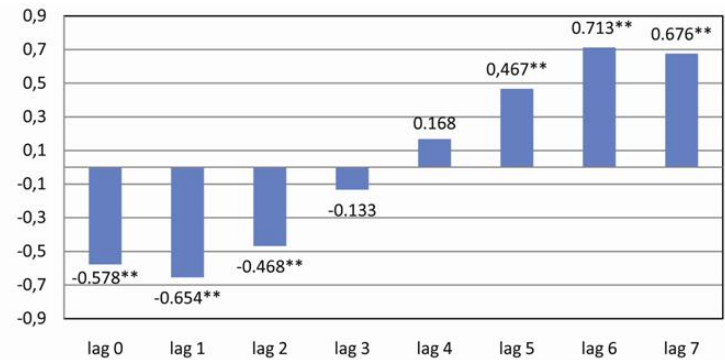
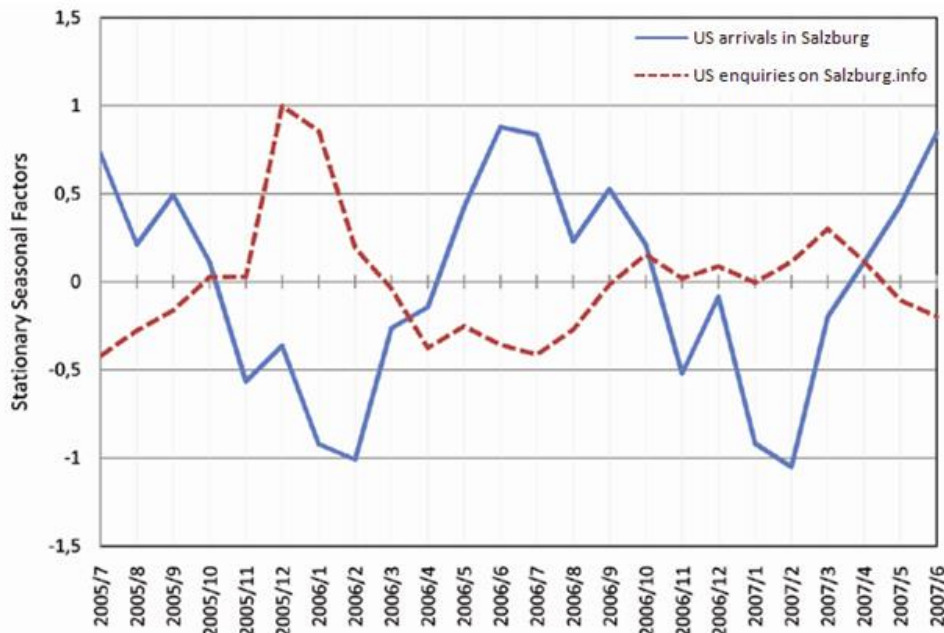
Cities - Webanalytics Benchmark						
Destination: Amsterdam Type of visitor: All visitors KPI: Number of Visits (30 min of inactivity considered a new visit) Market: All markets Period: Last 7 Days						
Period	Amsterdam		Benchmark (1)			
	KPI	Index	KPI Ø	Index	Number (2)	in % (3)
2015-08-31	30193	100.0	3499	100.0	10	762.7
2015-09-01	30040	99.5	5188	148.3	7	478.9
2015-09-02	30898	102.3	4552	130.1	8	578.8
2015-09-03	30368	100.6	4593	131.2	8	561.2
2015-09-04	30361	100.6	4261	121.8	9	612.4
2015-09-05	27992	92.7	4756	135.9	8	488.5
2015-09-06	30224	100.1	5510	157.4	7	448.5
(1) = Brussels, Graz, Helsinki, Lisbon, Oslo, Salzburg (city), Tallinn, Turku, Vienna, Vilnius. (2) = Cities (3) = guest mix share %						
Table: WEB-ECM1						
Generated 2015-09-07 (16-25-57)						
(c) ÖW/MU (http://www.tourmis.info)						

TourMIS - Example



* Brussels, Graz, Helsinki, Lisbon, Oslo, Salzburg (city), Tallinn, Turku

Comparison of US Arrivals in Salzburg and number of visits on www.salzburg.info



Pearson's correlations for various time lags. The higher the number of enquiries, the higher are the number of arrivals (for positive values).

11 Destinations on Webanalytics

- | | |
|-------------|--------------|
| 1. Bruges | 10. Czech R. |
| 2. Brussels | 11. Poland |
| 3. Ghent | |
| 4. Helsinki | |
| 5. Maribor | |
| 6. Salzburg | |
| 7. Tallinn | |
| 8. Turku | |
| 9. Vilnius | |

- www.vienna.info
 - 6.6mn visits p.y. (~ 550,000 p.m., 20,000 p.d.)
 - Vienna: ~ 3.6GB per year, 300MB per month
- Current project
 - 11 destinations: ~70GB of Piwik data
 - vs. TourMIS database: 0.7GB
- Vision: 120 destinations, 10 years
 - = 3,840GB (+32 GB p.m. or +384 GB p.y.)
 - 100mn+ page views per month (~ 200 destinations), Piwik will start reaching php memory limits or other Mysql or hardware limitations

- **TourMIS webanalytics setup fee (snippet installation, database initialization, user rights)
EUR 400,- (one time)**
- **Bandwidth contribution per year: EUR 400,-
(starting on 1.1., initial months until 1.1. = free)**

If you are interested, get in touch with us!



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Visitors to attractions and sites

MyTourMIS

Destination: Aachen

Information: Bednights in all forms of paid accommodation in city area only

Year: 2015

OK

1000 / %

My TM

Cities - Nights and arrivals - Annual data
Arrivals/nights for various markets

Destination: Aachen
Information: Bednights in all forms of paid accommodation in
Period: 2015

Market	absolute	+/-	% p.y.
Austria	7,161	638	9.8
Belgium	37,033	-1,206	-3.2
Bulgaria	807	-69	-7.9
Croatia	4,082	3,349	456.9
Cyprus	678	109	19.2
Czech Rep.	2,180	423	24.1
Denmark	3,160	276	9.6
Estonia	192	32	20.0
Finland	1,986	125	6.7
France	20,207	974	5.1

http://www.tourmis.info/?id=woeber&entry=XXXXX&db=ECT&zl=AAH&vonjahr=2015&in...

My TourMIS

MyQuery: ECM-J3: Arrivals/nights for various markets

Period: ☒ static period ☐ flexible period

Return

Save

100%

69 user are currently using MyTourMIS (210 queries)

Setting: ‚flexible period‘

Today: **September 11, 2014**

Some day in the future: e.g. **November 2014**

Table 1: Juli 2014

September 2014

Table 2: 2001 – 2012

2001 – 2012

Table 3: January 2011 – August 2014

January 2011 – **October** 2014



Travel Distance Estimator

Objectives:

1. Analysis of market chances
2. Monitoring and comparing different forms of means of transportation (airline dependency)
3. Estimating CO2 emissions

- **New tables**
 - Capacities: Showing longitudinal data
 - Attractions: Add number of opening days to tables that show visitor numbers
 - Attractions: Add additional input table for entering visitor numbers for multiple years (for one attraction)

Proposing new tables

Drafting a new table Example: Average length of stay

Suggested label of table: Average length of stay in one ETC destination¶

Destination=<to be selected>¶

Type of Accommodation=<to be selected>¶

Period=mm1/yy1~mm2/yy2<to be selected>¶

¶

¶	Arrivals¶			Bednights¶			Avg-Length-of-Stay¶		¶
¶	mm1/yy1¶ -¶ mm2/yy2¶ (absolute)¶	mm1/(yy1-1)¶ -¶ mm2/(yy2-1)¶ (absolute)¶	%p.y.¶	mm1/yy1¶ -¶ mm2/yy2¶ (absolute)¶	mm1/(yy1-1)¶ -¶ mm2/(yy2-1)¶ (absolute)¶	%p.y.¶	mm1/yy1¶ -¶ mm2/yy2¶ (days)¶	mm1/(yy1-1)¶ -¶ mm2/(yy2-1)¶ (days)¶	¶
Market-A¶	¶	¶	¶	¶	¶	¶	¶	¶	¶
...¶	¶	¶	¶	¶	¶	¶	¶	¶	¶
Market-Z¶	¶	¶	¶	¶	¶	¶	¶	¶	¶

Submit to tourmis@modul.ac.at

Meeting Statistics: Sample 2015

Sample 2015: 61 cities

Sample trend analysis 2014-2015: 45 cities

	Non-Corporate		Corporate	
	International	National	International	National
2015	60	52	58	52
<i>Trends analysis</i>	45	30	41	30

Meeting Statistics: Sample 2015

AARHUS	DRESDEN	LJUBLJANA	STOCKHOLM
AMSTERDAM	EDINBURGH	LONDON	SAINT PETERSBURG
ANTWERP	ESPOO	LUCERN	SALZBURG
BARCELONA	FUNCHAL	LUXEMBOURG	SAN SEBASTIAN
BERLIN	GDANSK	LYON	SEVILLA
BERN	GENEVA	MALMÖ	TURKU
BILBOA	GIJON	MONTREUX	TEL AVIV
BIARRITZ	GIRONA	MONACO	TALLIN
BRUGES	GHENT	MOSCOW	The HAGUE
BERGEN	GRAZ	OPATIJA	TURIN
BORDEAUX	GOTHENBURG	OSLO	UPPSALA
BUDAPEST	HELSINKI	PARIS	VALENCIA
BOLZANO	INSTANBUL	POZNAN	VIENNA
COPENHAGEN	LAUSANNE	PRAGUE	ZAGREB
DARMSTADT	LISBON	REYKJAVIK	ZARAGOZA
			ZURICH

Meeting Statistics: Sample 2015

tom :1 = Corporate; 2 = Non-Corporate

scope: 1 = National; 2 = International

tol: 1 = Congress & Convention Centers; 2 = Hotels; 3 = Universities; 4 = Others

icca: 1-31 (meeting themes)

ECM_MICE statistics2015_mastersheet - Microsoft Excel

	A	B	C	D	E	F	G	H	I	J
1	zl	id	meeting	start	ende	tom	pax	scope	tol	ICCA
5406	ANR		BAB-Antwerpen	01.06.15	01.06.15	2	120	1	1	9
5407	ANR		Avia Gis	01.08.15	01.09.15	2	10	1	1	21
5408	ANR		AP Hogeschool	01.09.15	01.09.15	2	10	1	1	10
5409	ANR		OCMW Antwerpen	01.12.15	01.12.15	2	15	1	1	21
5410	ANR		Umicore	01.01.15	02.01.15	2	13	1	1	21
5411	ANR		VAL-I-PAC vzw	01.02.15	01.02.15	2	10	1	1	21
5412	ANR		KBC Groep NV	01.02.15	01.02.15	2	26	1	1	9
5413	ANR		Sap	01.02.15	01.02.15	2	36	2	1	21
5414	ANR		AG VESPA	01.02.15	01.02.15	2	150	1	1	21
5415	ANR		2trade.com bvba	01.02.15	01.02.15	2	18	1	1	21

Objectives:

1. Monitoring and comparing the daily expenditures of all and individual markets (domestic plus 59 foreign markets) for destinations who perform visitor surveys

Focus: Average daily expenditures of tourists (excluding transportation to the destination) broken down by

- accommodation
- food and beverages
- entertainment
- shopping
- local transportation
- other

2. Developing an econometric model which allows to estimate the direct economic contribution of tourism even if there is no or only incomplete data available for a particular destination

Summary and Feedback