

Maps in Business Intelligence – Dashboards reloaded

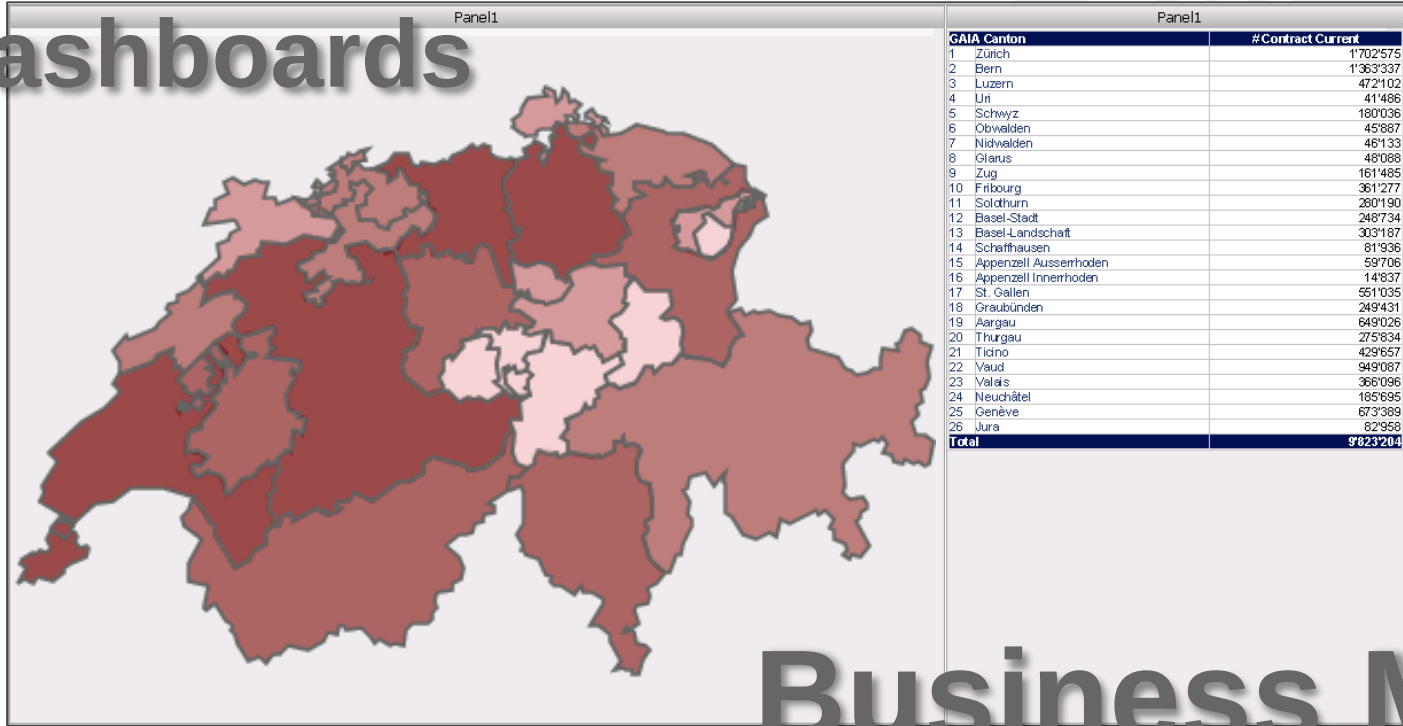
GeoBeer #8

Christoph Kiefer | Tobias Brühlmeier

Crosswind
UNLOCK THE WHERE

Unternehmens-Reporting

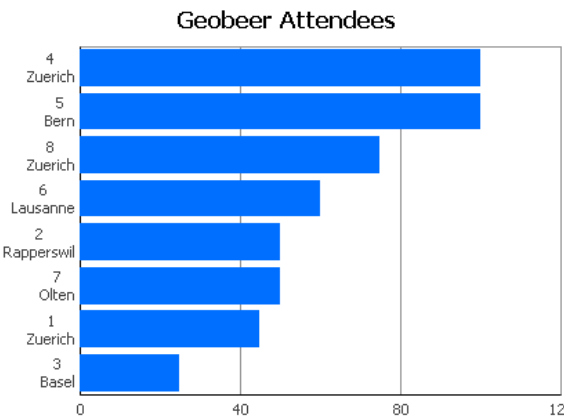
Dashboards



Business Maps

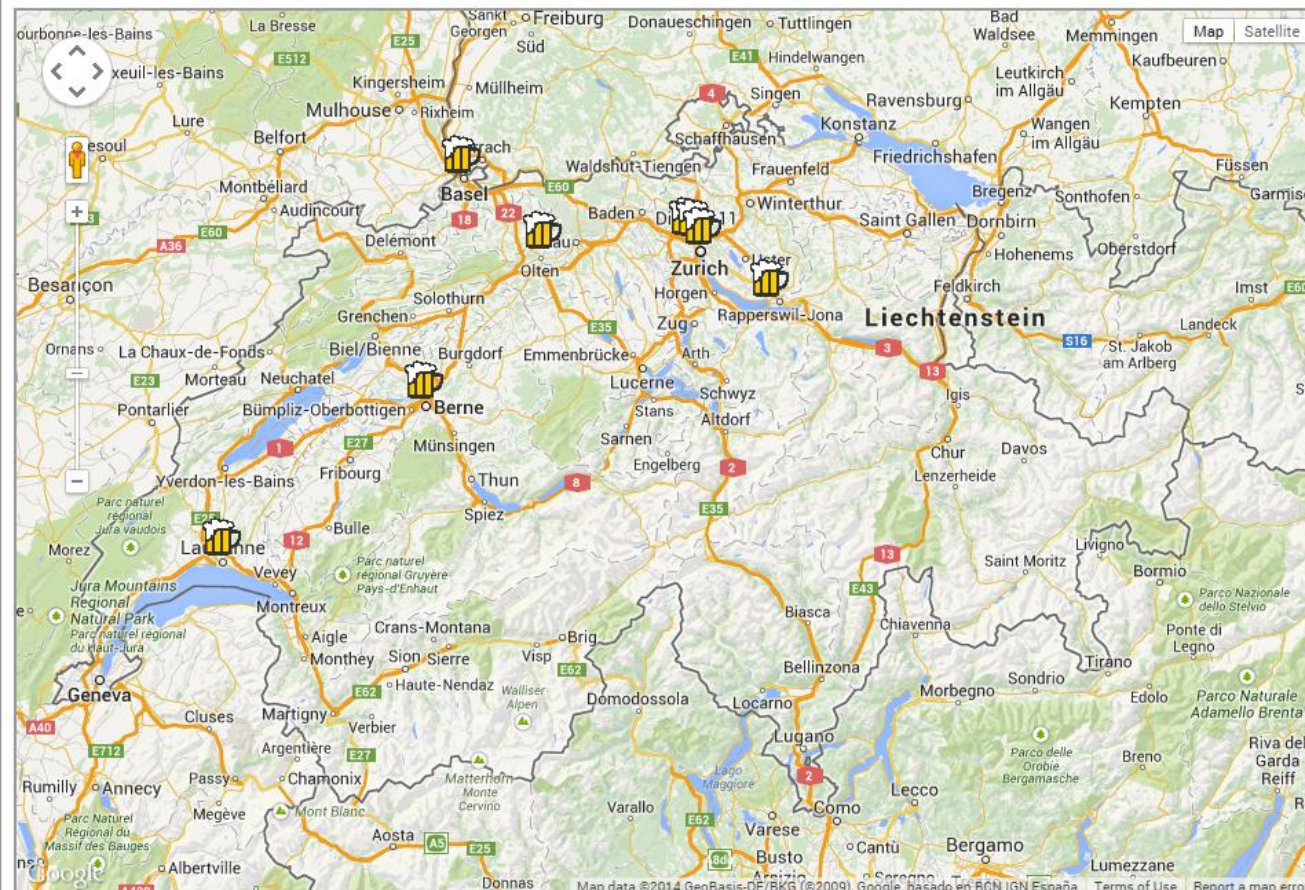
Extremely Simple Geobeer Statistics Dashboard -- Cheers!

Id	Sponsor	City	Date	Latitude	Longitude	Num Attendees
4	Esri Schweiz AG	Zuerich	2013-09-25	47.387374	8.52243	100
5	Geosharing Workshop	Bern	2013-10-31	46.947514	7.437013	100
8	Crosswind	Zuerich	2014-09-10	47.390181	8.492737	75
6	INSER	Lausanne	2014-03-20	46.51716	6.629607	60
2	Hochschule Rapperswil	Rapperswil	2013-06-13	47.223519	8.817275	50
7	geOps	Olten	2014-05-06	47.352304	7.907774	50
1	Ernst Basler + Partner	Zuerich	2013-03-06	47.366621	8.550056	45
3	FHNW	Basel	2013-07-03	47.558607	7.58779	25

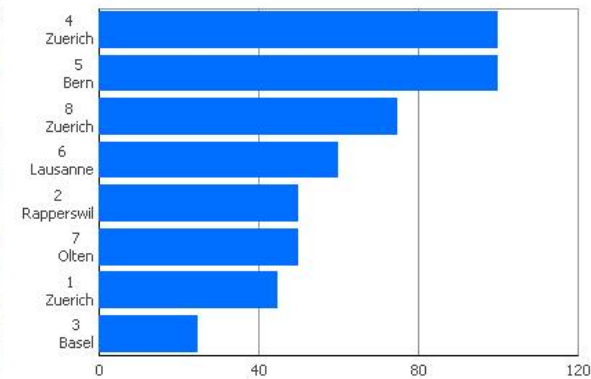


Id	City	Geobeer Attendees
4	Zuerich	100
5	Bern	100
8	Zuerich	75
6	Lausanne	60
2	Rapperswil	50
7	Olten	50
1	Zuerich	45
3	Basel	25

Extremely Simple Geobeer Statistics Dashboard -- Cheers!

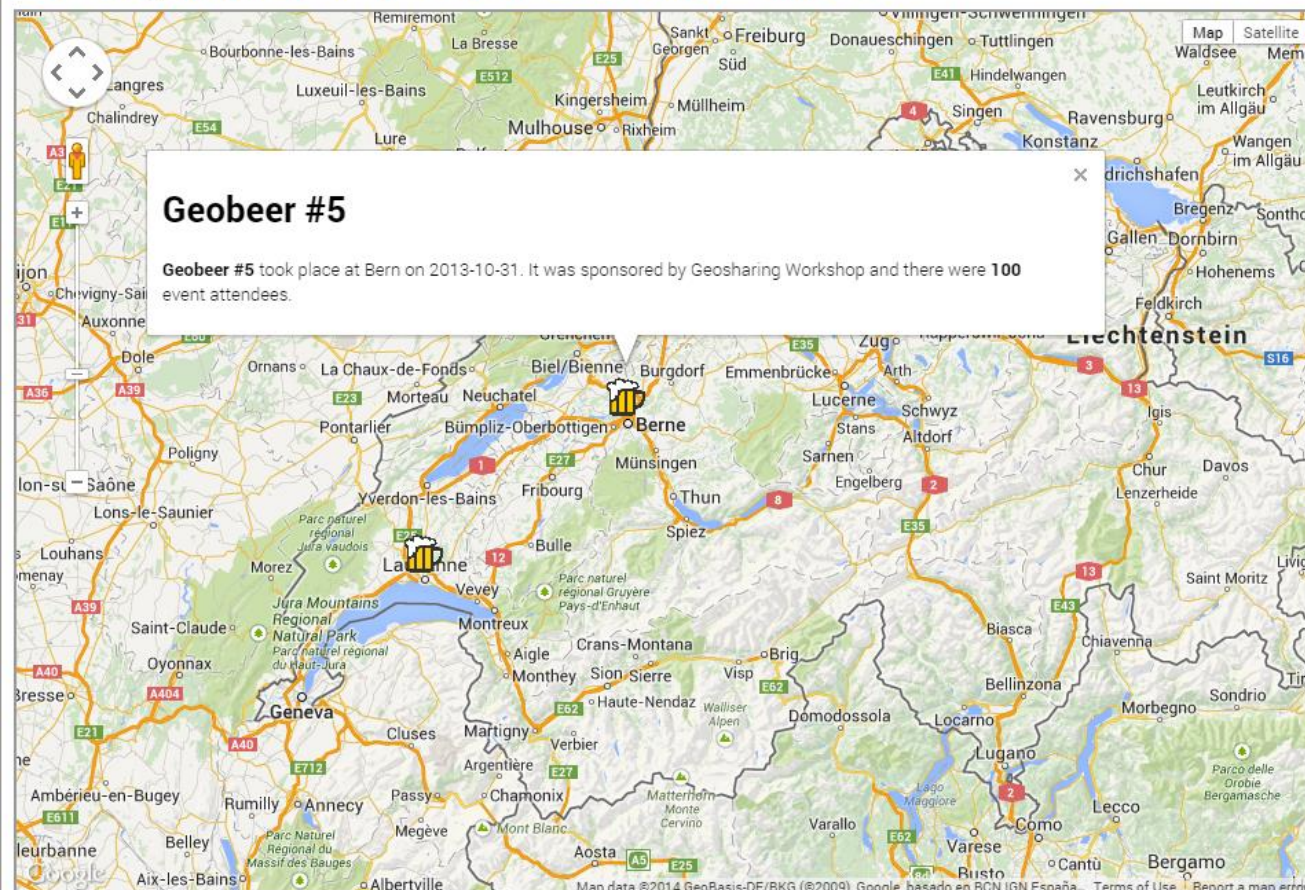


Geobeer Attendees

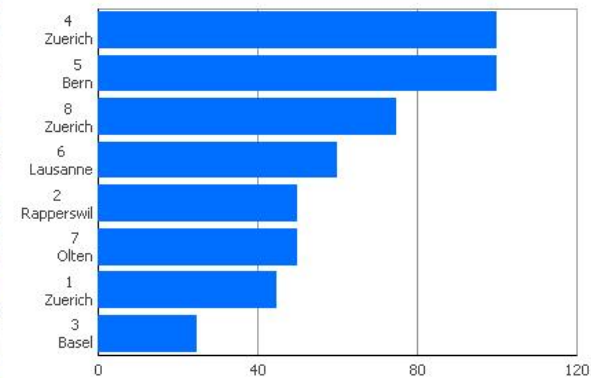


Geobeer Attendees		
Id	City	
4	Zuerich	100
5	Bern	100
8	Zuerich	75
6	Lausanne	60
2	Rapperswil	50
7	Olten	50
1	Zuerich	45
3	Basel	25

Extremely Simple Geobeer Statistics Dashboard -- Cheers!



Geobeer Attendees



Geobeer Attendees		
Id	City	Attendees
4	Zuerich	100
5	Bern	100
8	Zuerich	75
6	Lausanne	60
2	Rapperswil	50
7	Olten	50
1	Zuerich	45
3	Basel	25

```

50 // Loop through every row of the XML
51 for (int i = 0; i < n.getLength(); i++) {
52     Element row = (Element) n.item(i);
53     NodeList rowCell = row.getChildNodes();
54     Element childLine = null;
55
56     // Id, Sponsor, City, Date, Latitude, Longitude, Attendees
57     String Nr = "nodata";
58     String Sponsor = "nodata";
59     String City = "nodata";
60     String Date = "nodata";
61     String Latitude = "nodata";
62     String Longitude = "nodata";
63     String Attendees = "nodata";
64
65     for (int c = 0; c < rowCell.getLength(); c++) {
66         childLine = (Element) rowCell.item(c);
67         if (c == 0) {
68             Nr = getCharacterDataFromElement(childLine);
69         }
70         if (c == 1) {
71             Sponsor = getCharacterDataFromElement(childLine);
72         }
73         if (c == 2) {
74             City = getCharacterDataFromElement(childLine);
75         }
76         if (c == 3) {
77             Date = getCharacterDataFromElement(childLine);
78         }
79         if (c == 4) {
80             Latitude = getCharacterDataFromElement(childLine);
81         }
82         if (c == 5) {
83             Longitude = getCharacterDataFromElement(childLine);
84         }
85         if (c == 6) {
86             Attendees = getCharacterDataFromElement(childLine);
87         }
88     }
89
90     result = result + " { nr: '" + Nr + "'" + ", sponsor: '" + Sponsor
91         + "'" + ", city: '" + City + "'" + ", date: '" + Date + "'"
92         + ", position: new google.maps.LatLng(" + Latitude + ", "
93         + Longitude + ") " + ", attendees: '" + Attendees + "'",";
94

```

DemoAjaxVizT22.java GoogleMapsCode DemoLayoutGoogle2.xml

```

1 var locations = [ { id:0,
2     nr: '1',
3     sponsor: 'Ernst Basler + Partner',
4     location: 'Zürich',
5     date: '2013-03-06',
6     position: new google.maps.LatLng(47.366621, 8.550056),
7     attendees: '45'}
8
9     { id:1,
10     nr: '2',
11     sponsor: 'Hochschule Rapperswil',
12     location: 'Rapperswil',
13     date: '2013-06-13',
14     position: new google.maps.LatLng(47.223519, 8.817275),
15     attendees: 50}
16
17     ...
18
19     { id:7,
20     nr: '8',
21     sponsor: 'Crosswind',
22     location: 'Zürich',
23     date: '2014-09-10',
24     position: new google.maps.LatLng(47.366621, 8.550056),
25     attendees: 75
26     }

```

```
<!DOCTYPE mstrlayout:layout SYSTEM "mstrlayout.dtd">
<mstrlayout:layout>
<![CDATA[
<html>
  <head>
    <meta name="viewport" content="initial-scale=1.0, user-scalable=no">
    <meta charset="utf-8">
    <title>Info windows</title>
    <style>
      html, body, #map-canvas {
        height: 100%;
        margin: 0px;
        padding: 0px
      }
    </style>
    <script src="https://maps.googleapis.com/maps/api/js?v=3.exp"></script>
    <script src="http://code.jquery.com/jquery-1.9.1.js"></script>
    <script>
]]>
<mstrlayout:render name="visualization" />
<![CDATA[
```

```
function initialize() {
```

```
  var mapOptions = {
    disableDoubleClickZoom: true,
    zoom: 8,
    center: new google.maps.LatLng(46.819767, 8.409992),
    // ROADMAP, SATELLITE, HYBRID, TERRAIN
    mapTypeId: google.maps.MapTypeId.ROADMAP
  };
```

```
  var map = new google.maps.Map(document.getElementById('map-canvas'), mapOptions);
```

```
$.each(locations, function(index, value) {
```

```
var contentString = '<div id="content">'
+ '<div id="siteNotice">'
+ '</div>'
+ '<h1 id="firstHeading" class="firstHeading">'
+ 'Geobeer #' + value.nr + '</h1>'
+ '<div id="bodyContent">'
+ '<p><b>'
+ 'Geobeer #' + value.nr
+ '</b>'
+ ' took place at '
+ value.city
+ ' on '
+ value.date
+ ' .'
+ ' It was sponsored by '
+ value.sponsor
+ ' and there were '
+ '<b>' + value.attendees + '</b>'
+ ' event attendees.'
+ '</p>'
+ '</div>' + '</div>';
```

```
var infowindow = new google.maps.InfoWindow({
content : contentString
});
```

```
var marker = new google.maps.Marker({
position : value.position,
map : map,
title : value.city,
icon: myIcon
});
```

Highspeed-Raster compression without loss

Luzius Ammann, Intergraph (Schweiz) AG

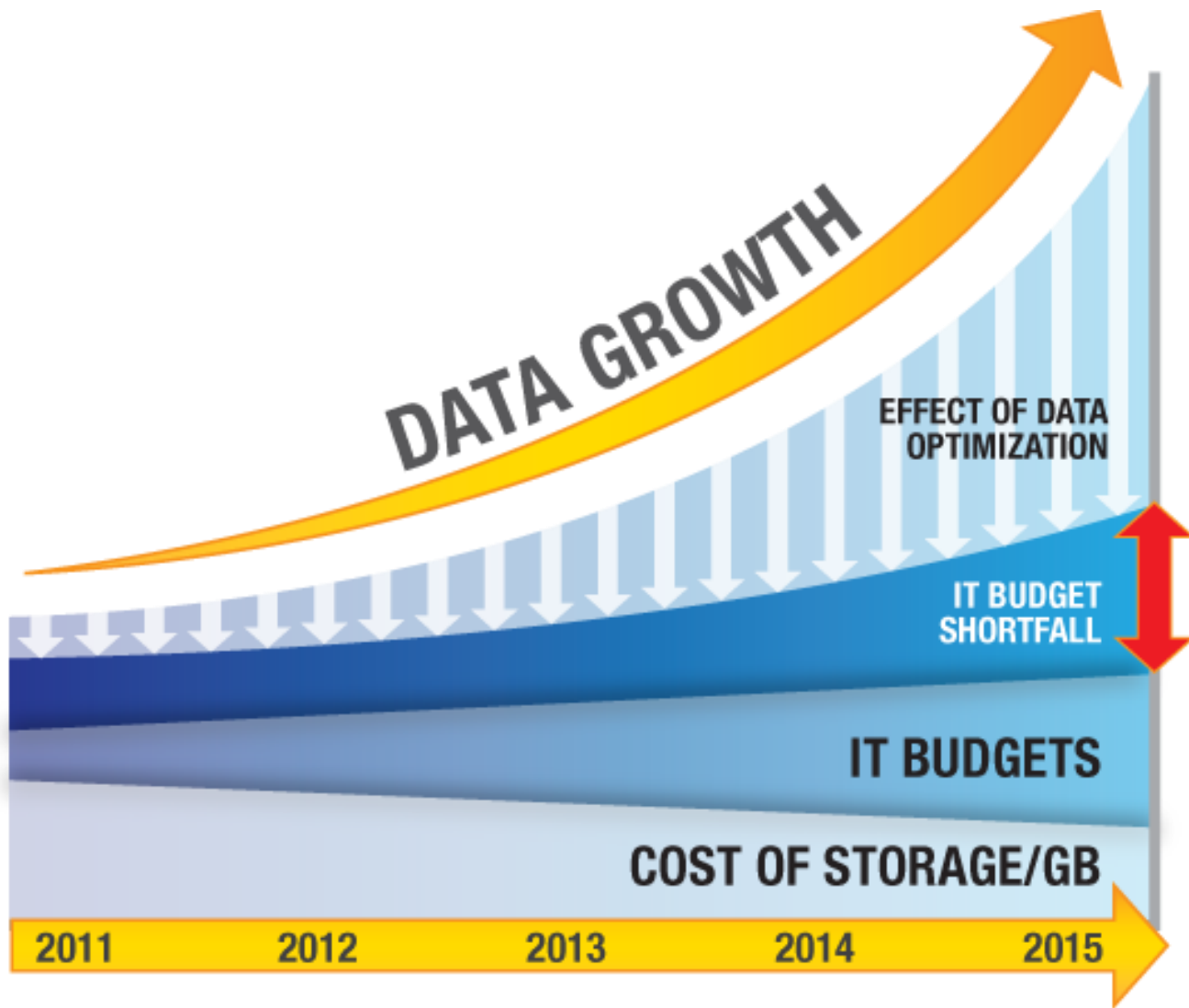
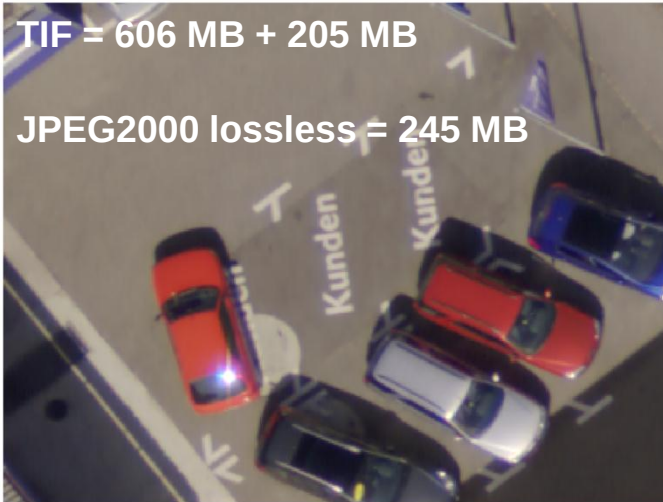


Diagram courtesy: Permabit Blog, 2011

TIFF bzw. JPG2000 lossless

TIF = 606 MB + 205 MB

JPEG2000 lossless = 245 MB



JPG2000 - komprimiert um Faktor 40

15 MB



25 MB reduced



TIFF - Pixelgröße um Faktor 5 vergrößert

6 MB Mobile Applications



JPG2000 - Kompressionsfaktor 100

- Leading technology
 - Lossless or lossy compression
 - Highest compression with good quality
 - No additional pyramids needed
 - Enables data-streaming
-
- Base for Enhanced Compressed Wavelet (ECW) and JPEG2000

ECW



Raw Imagery



+1 ECW mosaic file

Conventional Approach



Raw Imagery



+Image Tiles



+Tile Pyramids



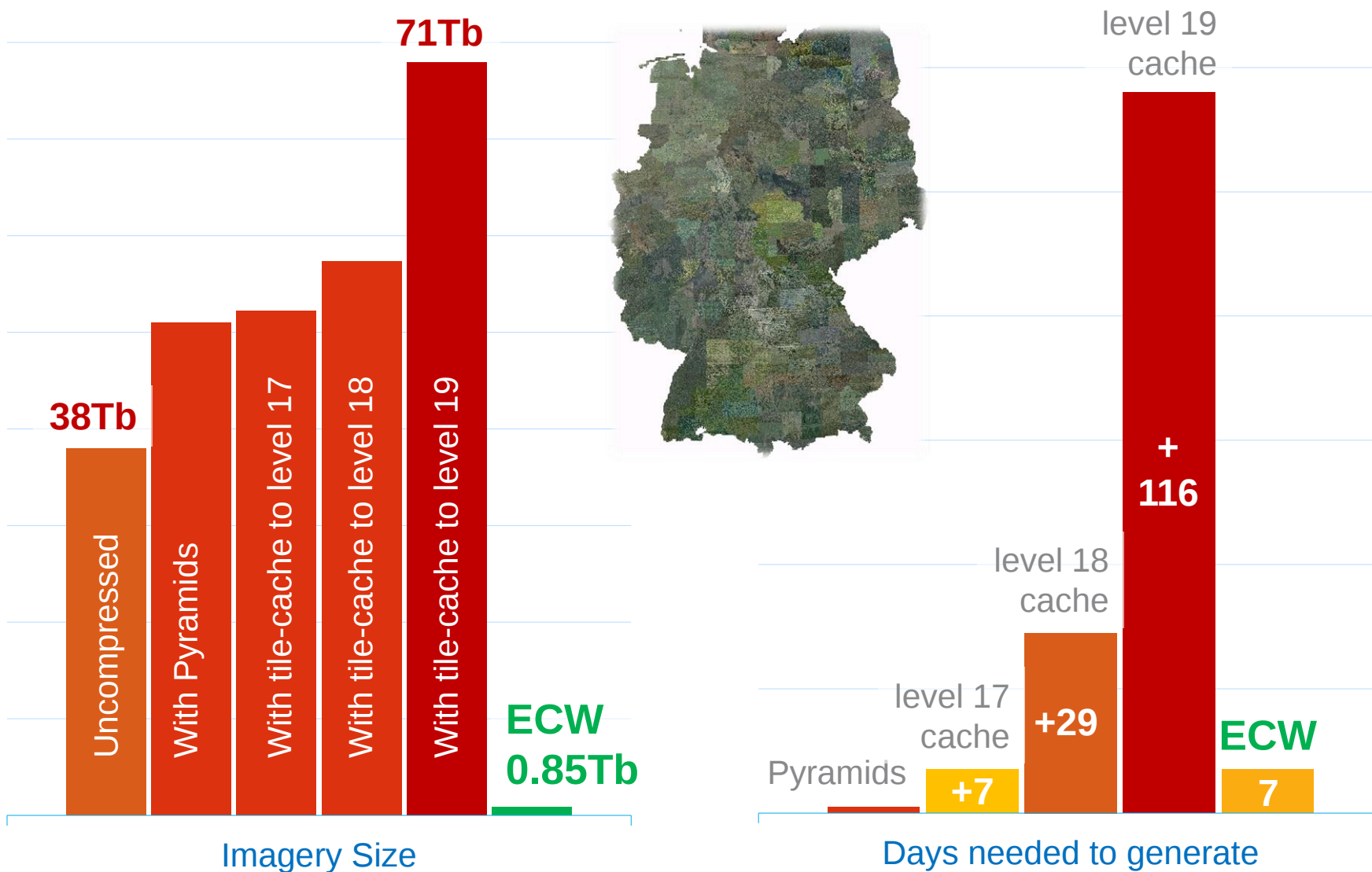
+Mosaic Overviews



+Tile Cache

Efficient processing and simple data structure:

- Easier to manage
- Time effective
- Provides a single source of truth
- One format to serve all software clients.



- Free desktop read-only licences
- No royalties

PLATFORM		Read-only	Read-Write
SERVER	    	 <u>End-user</u>  <u>Redistributable</u>	 <u>Redistributable</u>  1 gigapixel 10 gigapixels 100 gigapixels 1000 gigapixels
	     	 <u>Redistributable</u>	 <u>Redistributable</u>  1 gigapixel 10 gigapixels 100 gigapixels 1000 gigapixels
	  	 <u>Redistributable</u>	



LIVE



Luzius Ammann

Technical Consultant

Product Owner BM

Intergraph (Schweiz) AG

Part of **Hexagon**

luzius.ammann@intergraph.com

www.intergraph.ch

Neumattstrasse 24

8953 Dietikon

Switzerland

T: +41 43 322 46 46