SQL Server 2014
Power BI
SharePoint 2013
K2

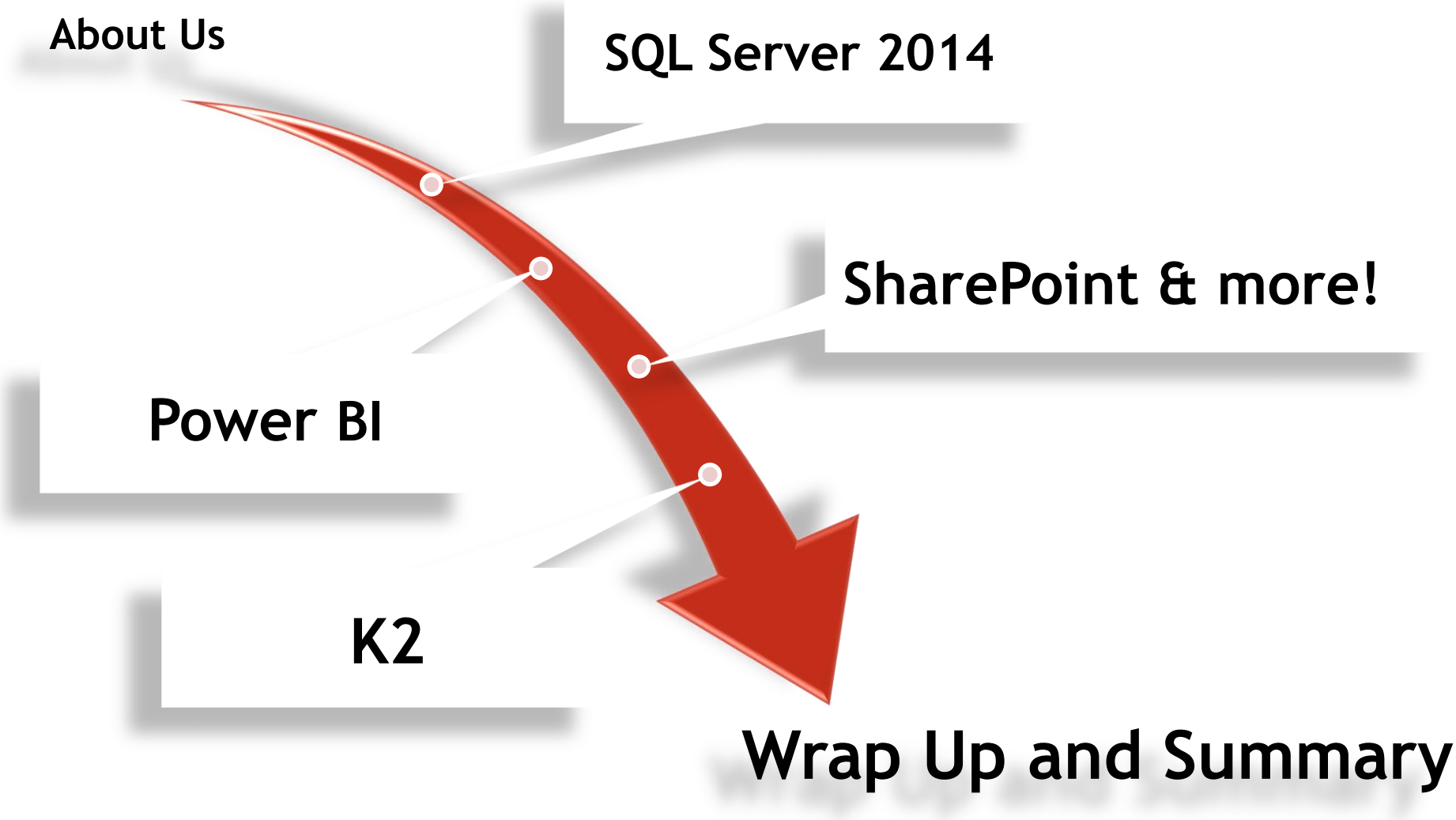
So What's New?

13 September 2015

- **Rolf Tesmer**
- SQL & BI Solution Architect

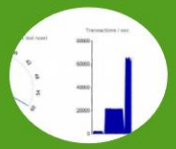
Agenda

What are we going to discuss today?



SQL Server 2014 - What's New?

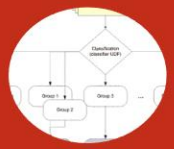
Top 5 New Features



In-Memory OLTP (Hekaton)

Updatable Column Store Indexes

Buffer Pool Extension (onto SSD)



Resource Governor for IO

Extends RG functionality to govern IOPS

Allows MIN and MAX settings

Database Backup Encryption

Encryption:
AES 128, AES 192, AES 256, Triple DES

Encryptor:
Certificate or asymmetric Key

Updatable Columnstore Indexes

Feature Goal: Improve Performance & Scalability

Been around since SQL Server 2012

- **Columnstore** indexes are **not new** to SQL Server…*a recap*…
  - A technology for storing, retrieving & managing data by using a **columnar** format
  - Work well for mostly **read-only queries** that perform analysis on **large data sets**
  - Is **primarily** a **memory optimised structure** (but can spool out to IO/Storage)
  - **~10x query performance gains** …*over* traditional row-oriented storage
  - **~7x data compression** …*over* the uncompressed data size

- So **What's New** for SQL 2014…?
  - **Clustered** columnstore is available (previously only **non-clustered** was available)
    - Clustered is the **physical storage structure** for the table
    - Clustered option has **no key columns**, all columns **MUST** be included
    - Clustered **MUST** be only index on the table, cannot be combined with others
  - Columnstore is **updateable** (previously only read-only available)

This is considered a KEY benefit for SQL Server 2014

Extend SQL Buffer Pool Extension (to SSD)

Feature Goal: Improve Performance & Scalability

- The **Buffer Pool** is **not new** to SQL Server… *a recap*…
  - One of the main **memory consumers** in SQL Server
  - When data is **read** from storage it is **cached** in the **Buffer Pool**
  - SQL caches **Execution Plans** in the **Plan Cache** (part of the **Buffer Pool**)
  - The more **physical memory** = the larger the **Buffer Pool**
  - **Typical** approach to resolving I/O bottlenecks? *Add* **More RAM** or **More Spindles**

As set by SQL config Max Server Memory

- **So What's New for SQL 2014…?**
  - Provides seamless **extension** of Buffer Pool to **nonvolatile RAM** (i.e. SSD)
  - Significantly improve I/O **throughput**, reduce I/O **latency**, increase **tps** throughput
  - Creates a **multilevel caching hierarchy** for the Buffer Pool…
    - **Level 1 (L1)** = DRAM
    - **Level 2 (L2)** = extension file on SSD

```
ALTER SERVER CONFIGURATION
SET BUFFER POOL EXTENSION ON
(
    FILENAME = 'd:\ExtensionFile.BPE',
    SIZE = 10 GB
)
GO
```

  - Only **clean pages** are written to the **L2 cache** -- helps maintain **data safety**

Pre-SQL Server 2012 Deployments
MAINSTREAM Support Ends – July 2014

- ***So what does this all mean?***
  - **NO** non-security hotfix support
  - **ALL** raised incidents are **charged**
  - **NO** warranty claims
  - **NO** design changes or feature requests
- ***So what are my options?***
  A. Don't upgrade - and ***RISK IT***…
  B. Buy **EXTENDED** Support Package
  C. Upgrade to **latest** / **supported** version
- ***So what are my Next Steps (…talk to us!)***
  1. Perform Health Check & Upgrade Review
  2. Plan upgrade roadmap / strategy
  3. Perform upgrade / migration - **testing**
  4. Perform upgrade / migration - **cutover**

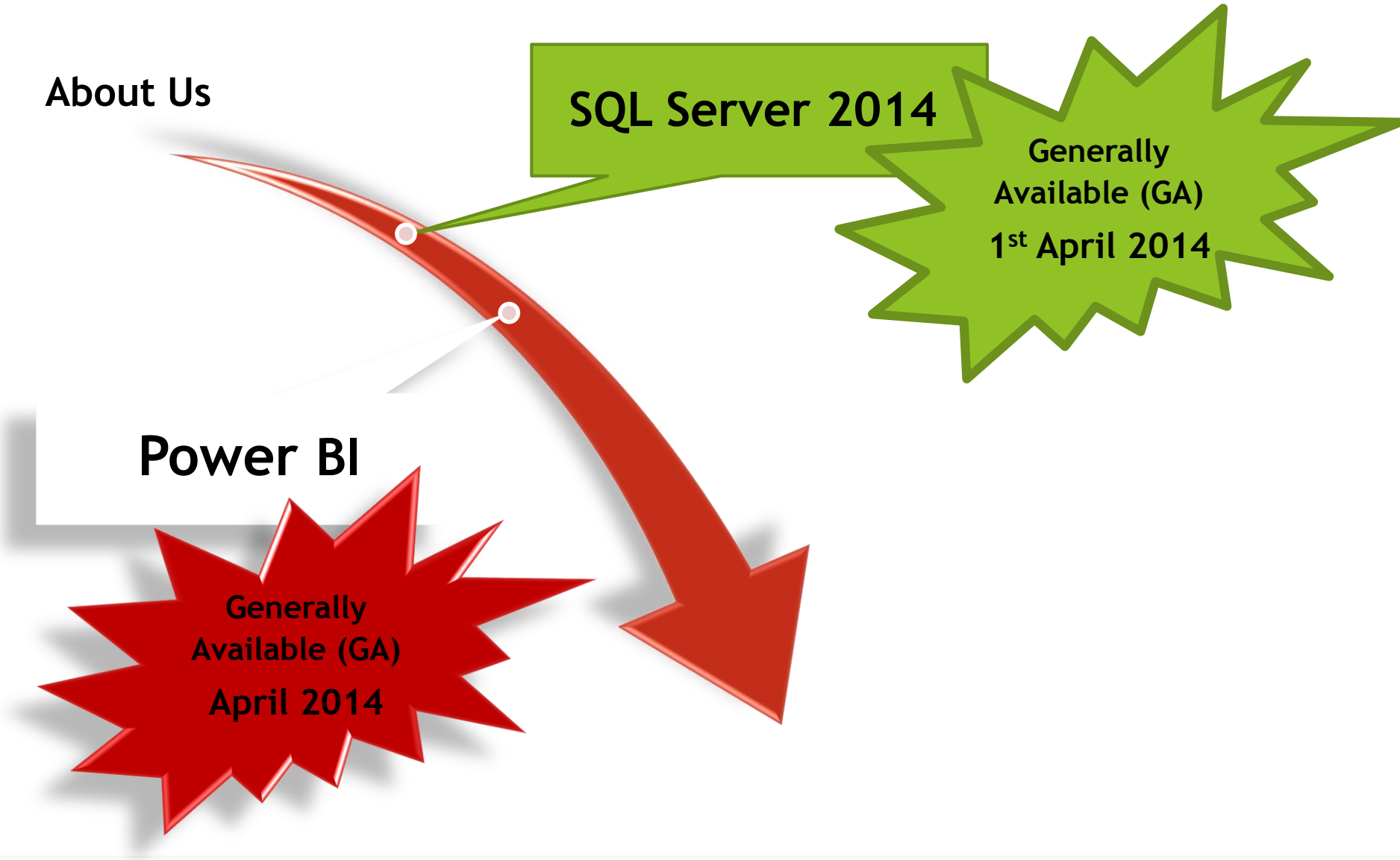
Feature Demonstration

In-Memory OLTP (Hekaton) – Bwin online gaming

Agenda

What are we going to discuss today?

About Us



Power BI – What's New?

Top 5 New Features

Power BI
(Excel Professional)
vs.
(Excel Office 365)

Power Query
Power Pivot
Power View
Power Map

Power BI
(Office 365)

GA April 2014

Generally available to **Australian** Office 365 subscription customers in Apr

Power BI
(Office 365)

BI Sites
Q&A
Data Experience

Power BI
(Office 365)

Mobile BI App

Windows 8.0/8.1
Windows RT
Apple (in progress)
Android…?

Power BI
(Office 365)

Data Centres

Power BI hosted in Singapore ONLY,
NO Australian DC

Power BI – Excel Professional vs. Office 365

What features are in which product

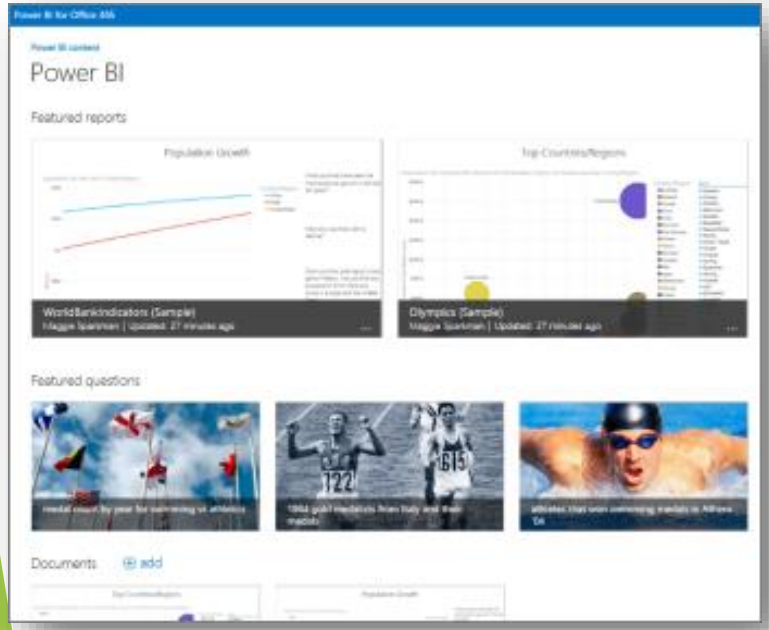
- Where will I find the features I want to use?

	Product / Feature	Excel (Professional) On Prem	Office 365 (Subscription) Cloud	SharePoint (Enterprise) On Prem
Power BI	Power Query	Yes	Yes Excel	No
	Power Pivot	Yes	Yes Excel & SharePoint (250MB)	Yes (+ SQL Server Enterprise)
	Power View	Yes	Yes Excel & SharePoint (incl HTML5)	Yes
	Power Map		Yes Excel	No
	BI Sites	No	Yes SharePoint & Power BI	Yes
	Q&A	No	Yes SharePoint & Power BI	No
	Data Management Gateway	No	Yes SharePoint & Power BI	No
	Mobile BI App	No	Yes SharePoint & Power BI	No

Power BI for Office 365

Power BI Sites

- **Power BI Sites**
  - The Power BI sites **application** *extends* your **SharePoint Online** site
  - Provides a **robust** & **dynamic** location to share and find **Excel workbooks**
  - Enables a **visual** & **interactive** view tailored specifically to **Power BI content**
  - Essentially serves the **same purpose** as a BI Site on **SharePoint Enterprise**
  - Is accessible via **client browser** or via **Power BI Mobile App**



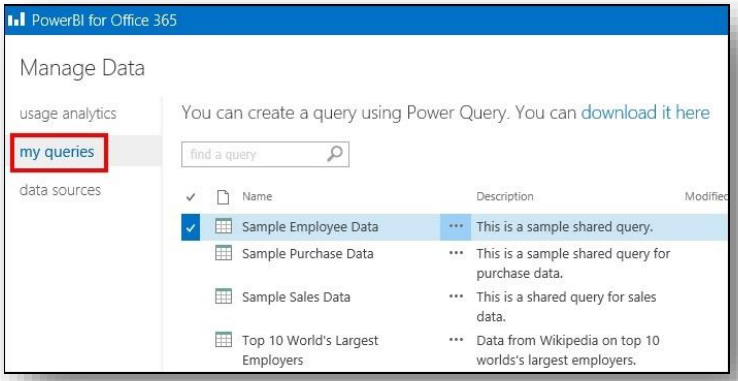
Feature Demonstration

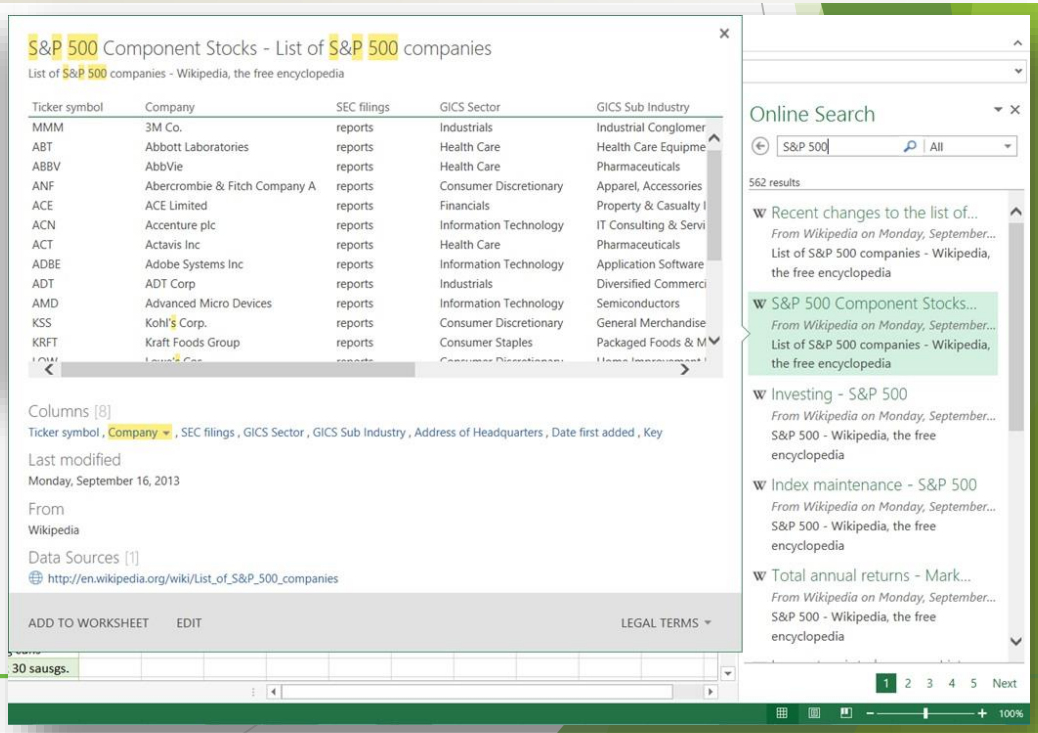
Mobile Power BI

Power BI for Office 365

Power BI Data Management Experience

- **Power BI Data Management Experience**
  - Provides **cloud-based** infrastructure to enable users to **discover**, **enrich**, and **share Excel Power Query workbooks** (data & queries) as shared data sources
  - The shared data/content is **discoverable** using Power Query **online data search**
  - Users can perform **BI analytics** on **shared data/queries** and include **other data**

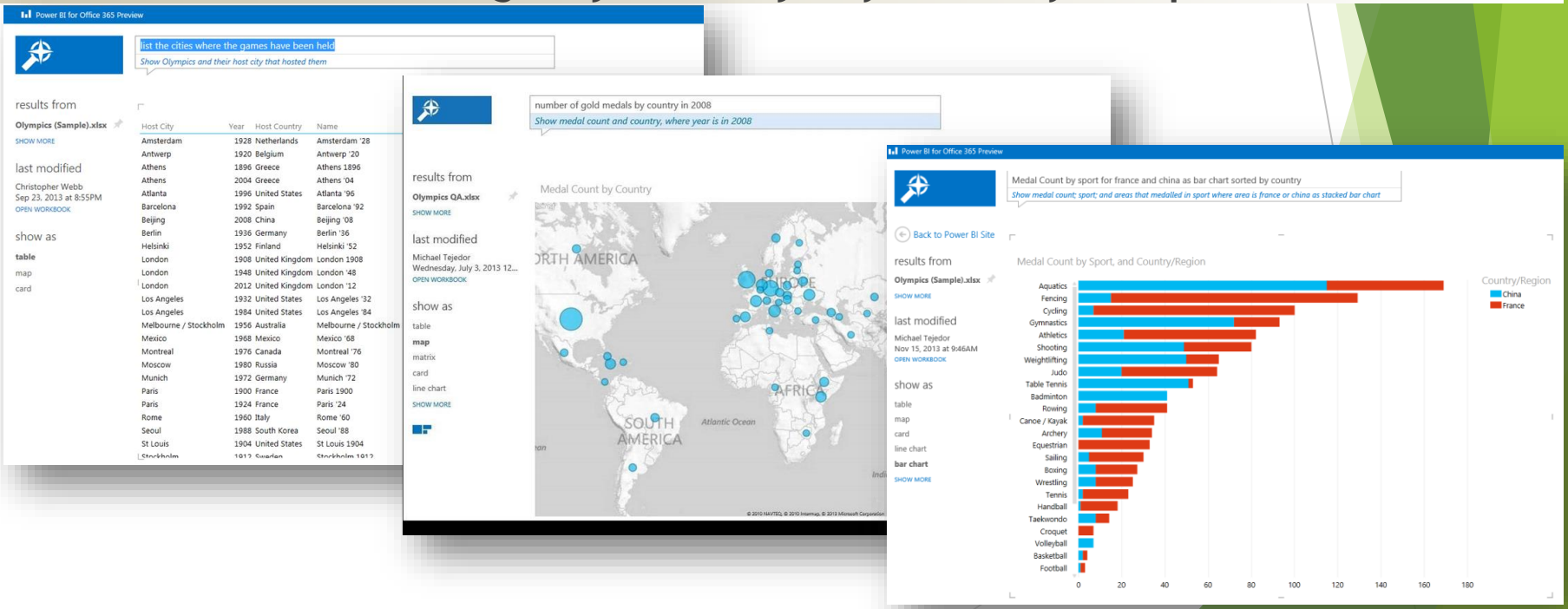




Power BI for Office 365

Power BI Q&A

- **Power BI Q&A**
  - Use **English natural language** to find answers in your own data
  - Presents your answers in the form of **visualisations**
  - As you type a **question** Power BI decides the **best visual** to display your **answer**
  - The **visualisation** changes **dynamically** as you modify the **question**

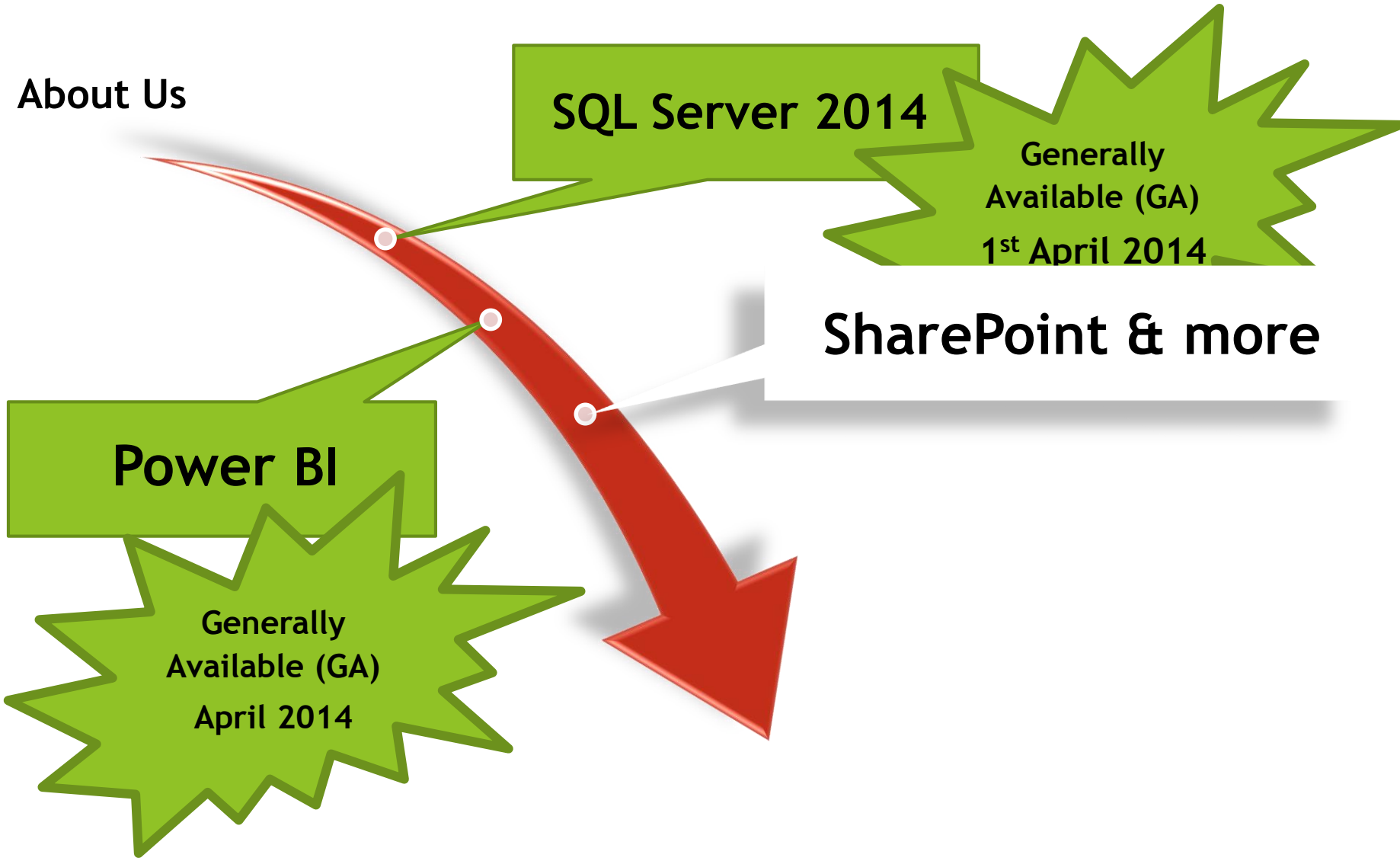


Feature Demonstration

Power BI for Office 365 – Natural Language Q&A

Agenda

What are we going to discuss today?



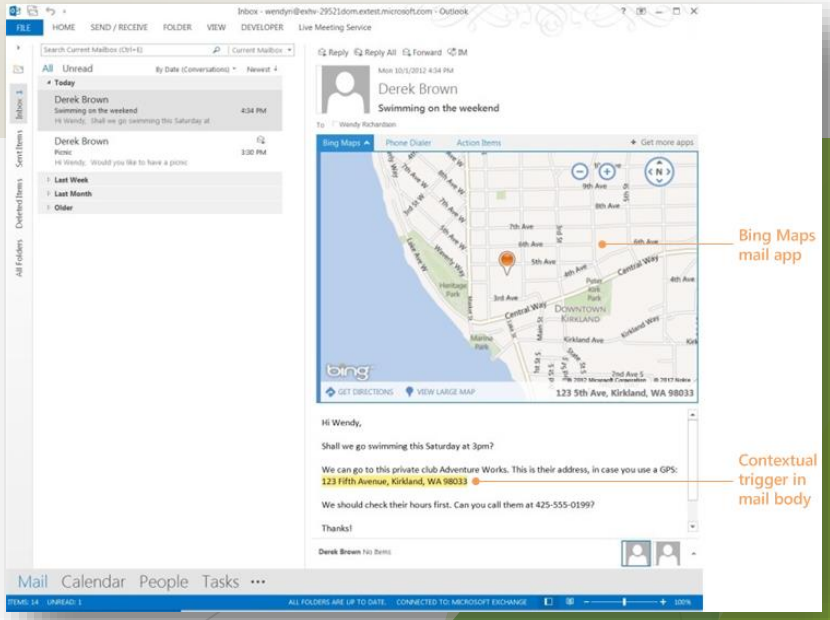
SharePoint & more – What's New?

Technology Updates

SharePoint & more

Service Pack 1

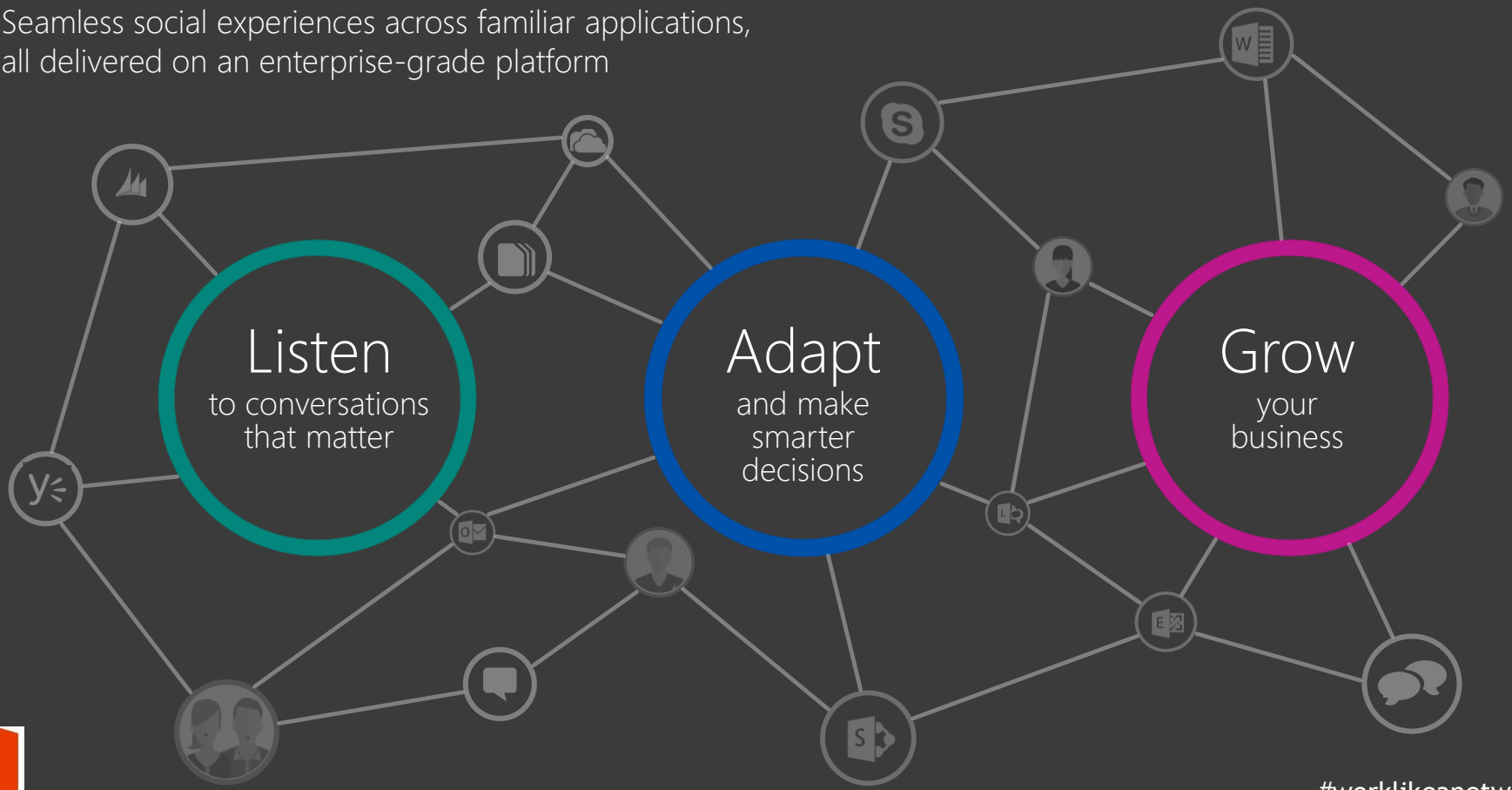
- **Compatibility fixes** for Windows 8.1 and Internet Explorer 11.
- **Modern Hardware**: high DPI devices and the precision touchpad
- **New Apps** for Office updates & developer API's
- **Seamless** hybrid connection to **OneDrive for Business** in **Office 365**.
- Support for **Yammer** as chosen **social network** (easier to replace default Newsfeed)
- Support for **JSON Light** in **OData**.



SharePoint & more

Social – work like a network

Seamless social experiences across familiar applications,
all delivered on an enterprise-grade platform



#worklikeanetwork

SharePoint & more

Social – new experiences

Inline Social

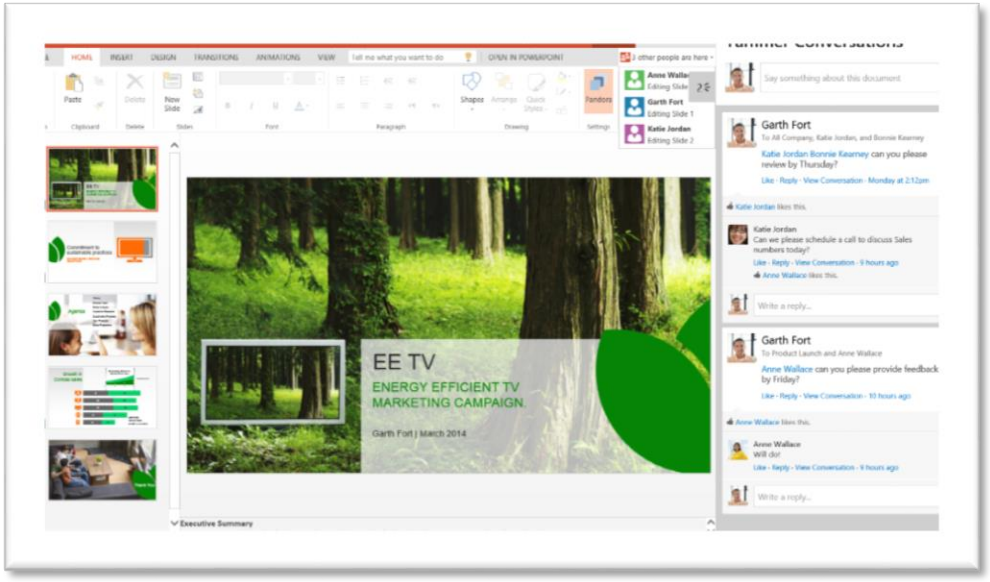
Groups

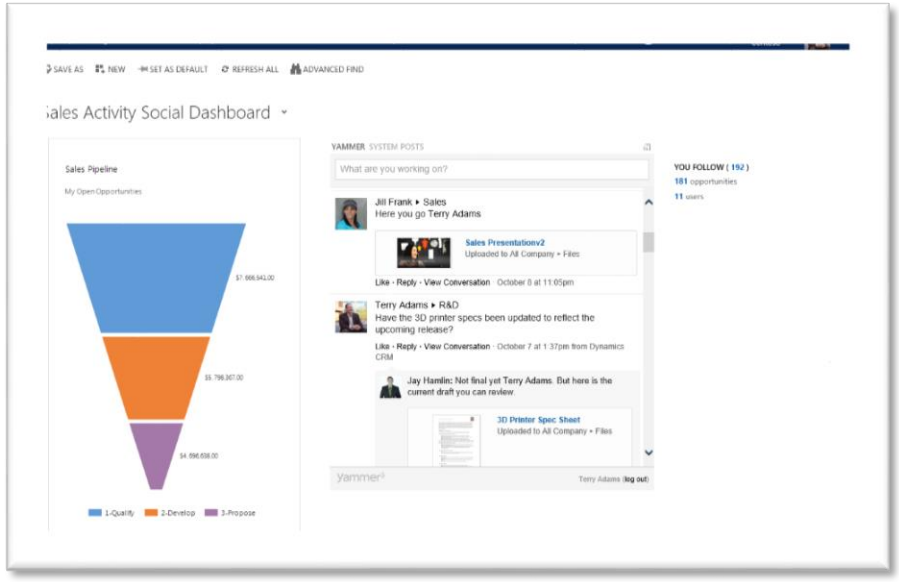
Office Graph

Microsoft

Extends social collaboration to Office 365, Dynamics, and other apps, services, and line-of-business systems.

Enables you to participate in social conversations from the tools of your choice



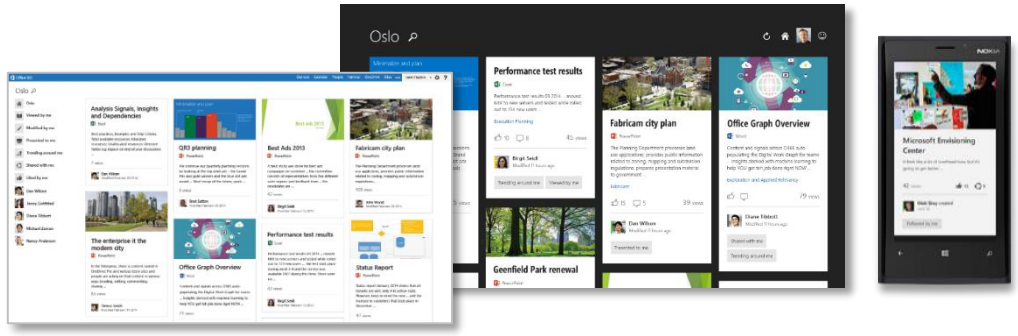


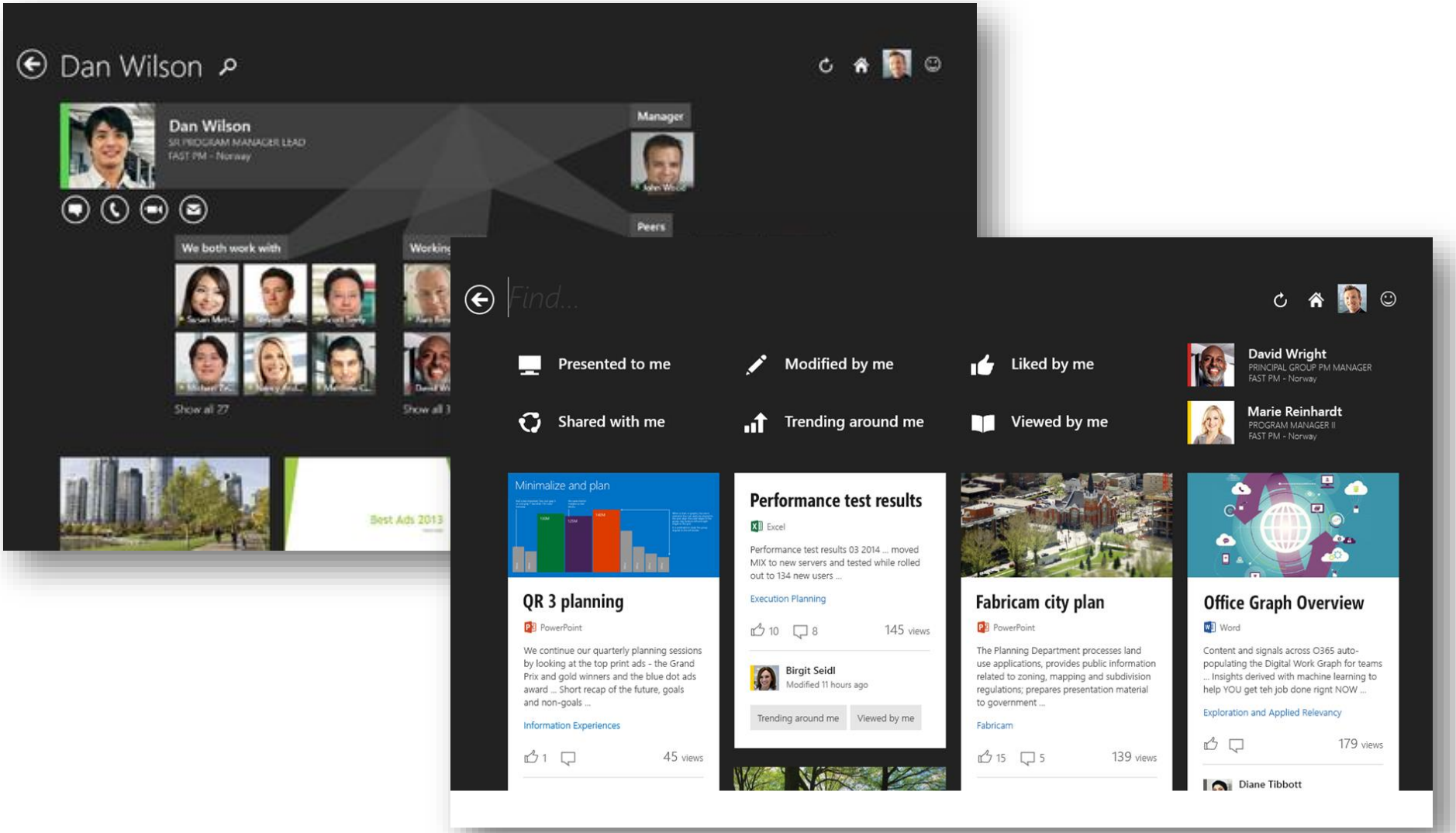
Office Graph

Exchange
SharePoint
Yammer
Lync

Content and signals across Office 365 auto-populating the **Office Graph** for teams.

Insights derived with machine learning to help YOU get the job done right NOW



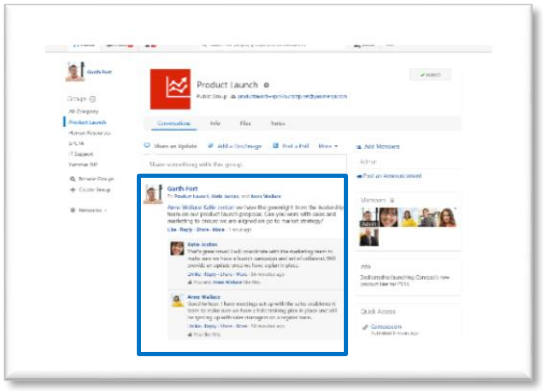

Dan Wilson
Dan Wilson
SR PROGRAM MANAGER LEAD
FAST PM - Norway
Manager
Peers
We both work with
Show all 27
Best Ads 2013
Find...
Presented to me
Modified by me
Liked by me
Shared with me
Trending around me
Viewed by me
David Wright
PRINCIPAL GROUP PM MANAGER
FAST PM - Norway
Marie Reinhardt
PROGRAM MANAGER II
FAST PM - Norway
Minimalize and plan
QR 3 planning
PowerPoint
We continue our quarterly planning sessions by looking at the top print ads - the Grand Prix and gold winners and the blue dot ads award ... Short recap of the future, goals and non-goals ...
Information Experiences
1
45 views
Performance test results
Excel
Performance test results 03 2014 ... moved MIX to new servers and tested while rolled out to 134 new users ...
Execution Planning
10
8
145 views
Birgit Seidl
Modified 11 hours ago
Trending around me
Viewed by me
Fabricam city plan
PowerPoint
The Planning Department processes land use applications, provides public information related to zoning, mapping and subdivision regulations; prepares presentation material to government ...
Fabricam
15
5
139 views
Office Graph Overview
Word
Content and signals across O365 auto-populating the Digital Work Graph for teams ... Insights derived with machine learning to help YOU get teh job done rignt NOW ...
Exploration and Applied Relevancy
179 views
Diane Tibbott

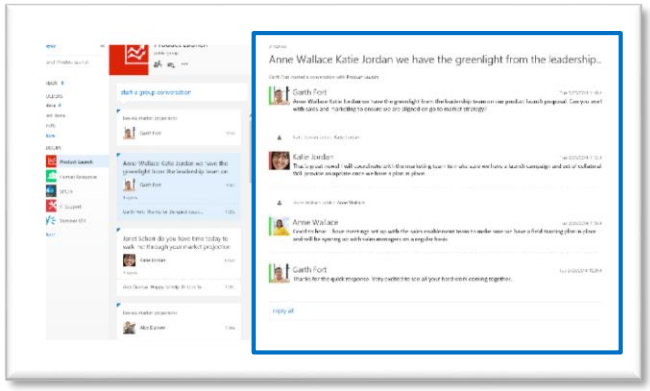
SharePoint & more

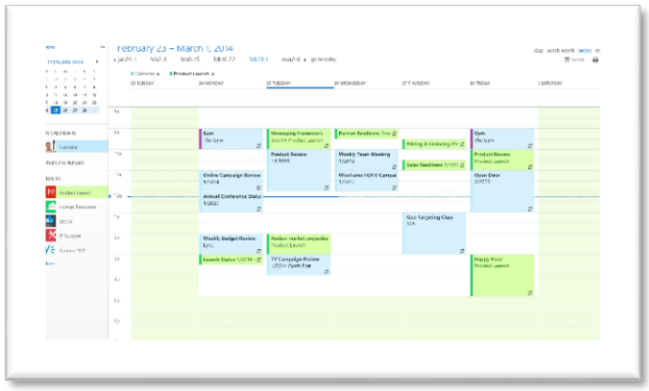
Yammer

Unifies People, Profiles, Conversations, Emails, Calendars, and Files across Office 365 and beyond.

Provides you with a rich and seamless collaboration experience across applications







SharePoint & more

SharePoint Social or Yammer?

Go Yammer

- Immediate adoption
- Rapid innovation
- Connect everyone

SharePoint on-premises and Yammer

- Service Pack 1 & Yammer app for SharePoint

SharePoint Social futures

- Committed to another SharePoint on-premises release
- Social capabilities will be maintained
- Don’t plan on adding new features

Social’s future: Yammer and Office 365

- Continued hybrid improvements

SharePoint & more

OneDrive for Business

SharePoint & more

OneDrive for Business

	OneDrive for Business				Office		Web	
	Win32	Mac *	iOS	Modern	Office Mobile	Office Desktop	mobile	desktop
My Docs	●	●	●	●	●	●	●	●
Team Sites	●	-	-	-	●	●	-	●
Recents	-	-	●	●	●	●	●	●
Shared with me	-	-	-	-	-	-	●	●
Offline	●	●	●	-	◖	◖	-	-
Sync & merge	●	◖	-	-	◖	●	-	-
Share	●	-	●	●	◖	●	●	●
Move	●	●	-	-	-	-	-	-
Rename	●	●	●	●	-	-	-	-
Upload / Save	●	●	●	●	●	●	-	●
Camera Upload	-	-	-	-	-	-	-	-
Edit	-	-	◖	◖	●	●	-	●

● fully implemented

◖ partially implemented

\- not implemented OR n/a

* planned 2014

SharePoint & more
Forms

- InfoPath – **no further investment**, support for next **10 years.**
- **No** replacement technology yet, so **no migration strategy.**

FORM TYPES	USER SCENARIOS		TIMEFRAME	
Excel Surveys	**Design** Excel Online—Excel Surveys	**Completion** Web	**Online** Continuously shipping	**On-premises** Included with Office 2013
List Forms	**Design** "FoSL"—Forms on SharePoint Lists	**Completion** SharePoint	**Online** Summer 2014-October 2015	**On-premises** SharePoint vNext
Structured Documents	**Word**		**Plans at the end of 2014**	
App Forms	**Design** Access	**Completion** SharePoint	**Online** Continuously shipping	**On-premises** Included with Office 2013

SharePoint & more

Forms Options

Agenda

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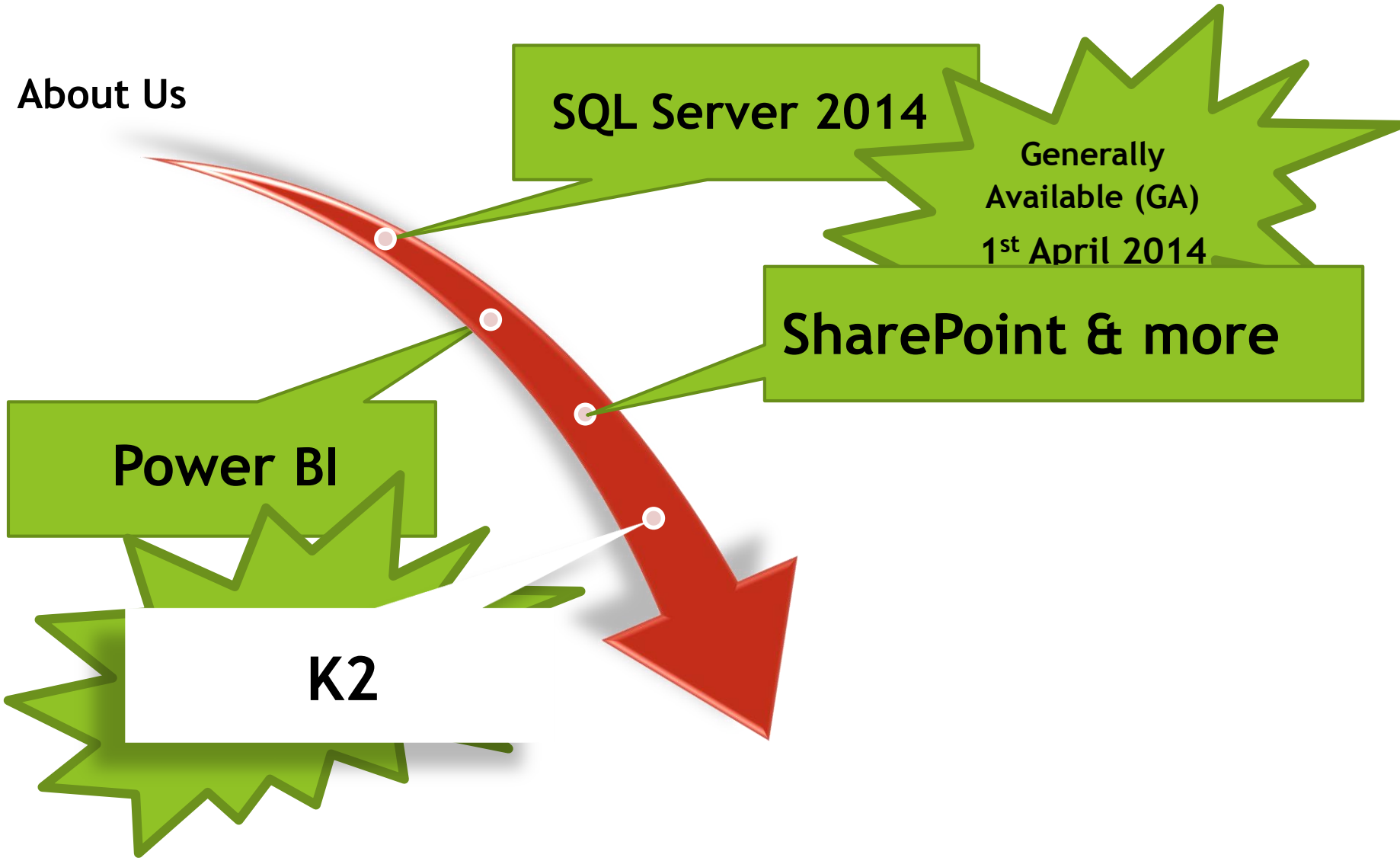


K2 - What's New?

Top Updates

K2 for SharePoint

Forms

Community

Mobile

K2

K2 for SharePoint

- K2 for SharePoint 2013 released on **26 March 2014**
- K2 **featured in several keynotes** at SharePoint Conference 2014
- **"K2 runs on Microsoft, Microsoft runs on K2"**
- K2 was the **Diamond Sponsor** of SharePoint Conference 2014
- A **lot of excitement** around this significant release
- Supports **full spectrum of user needs** from simple to complex
- **Feature parity** across SharePoint Online and On Premise and supports **hybrid infrastructures**

Additional Information:
http://www.k2.com/sharepoint

K2

K2 smartforms

- Microsoft formally announced that they are **no longer investing in InfoPath**
- Microsoft Future of Forms for SharePoint session at SPC 2014 **did not reveal any significant replacement**
- **K2 smartforms** ideally placed to provide forms both inside and outside of SharePoint
- A **lot of excitement** around K2 smartforms at SPC 2014

Additional Information:

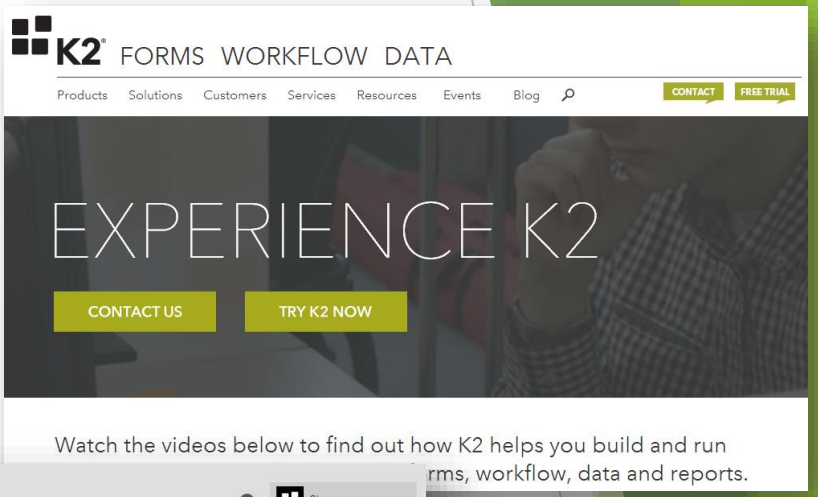
http://www.k2.com/blog

http://www.k2.com/platform/forms

K2 Community

- Provides the ability to get your hands on K2 and play for yourself via **“Try Now”**

- View **videos** on various parts of the K2 platform:
  - Designing Forms
  - Rules in Forms
  - Data in Forms
  - Using Forms
  - Designing Workflows
  - Rules in Workflows
  - Task Routing
  - Managing Workflows
  - Task Management
  - Designing Data Access
  - OOB Data Options
  - Designing Dashboards
  - Notifications
  - SharePoint Data
  - SharePoint Apps

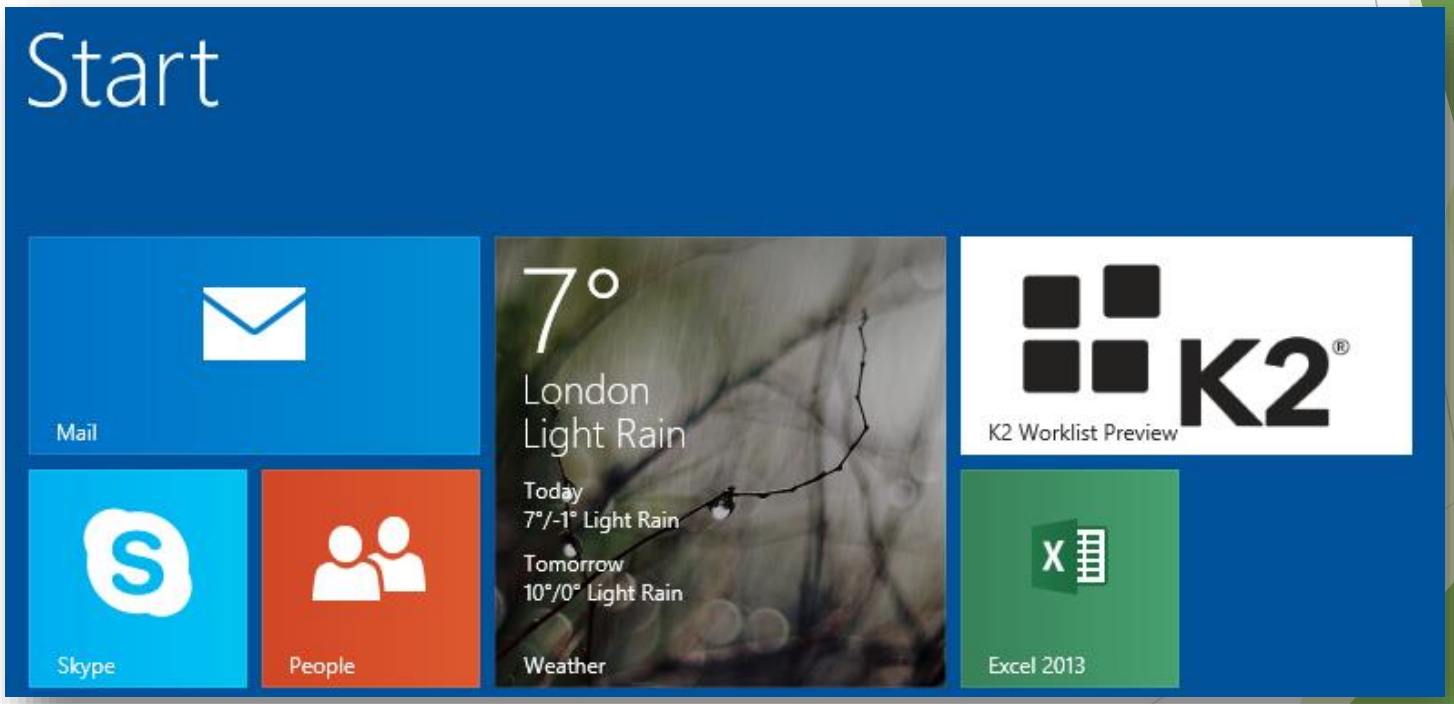


Additional Information:
http://www.k2.com/experience-k2

K2
Mobile

Windows 8 Phone

Available on the iPhone App Store



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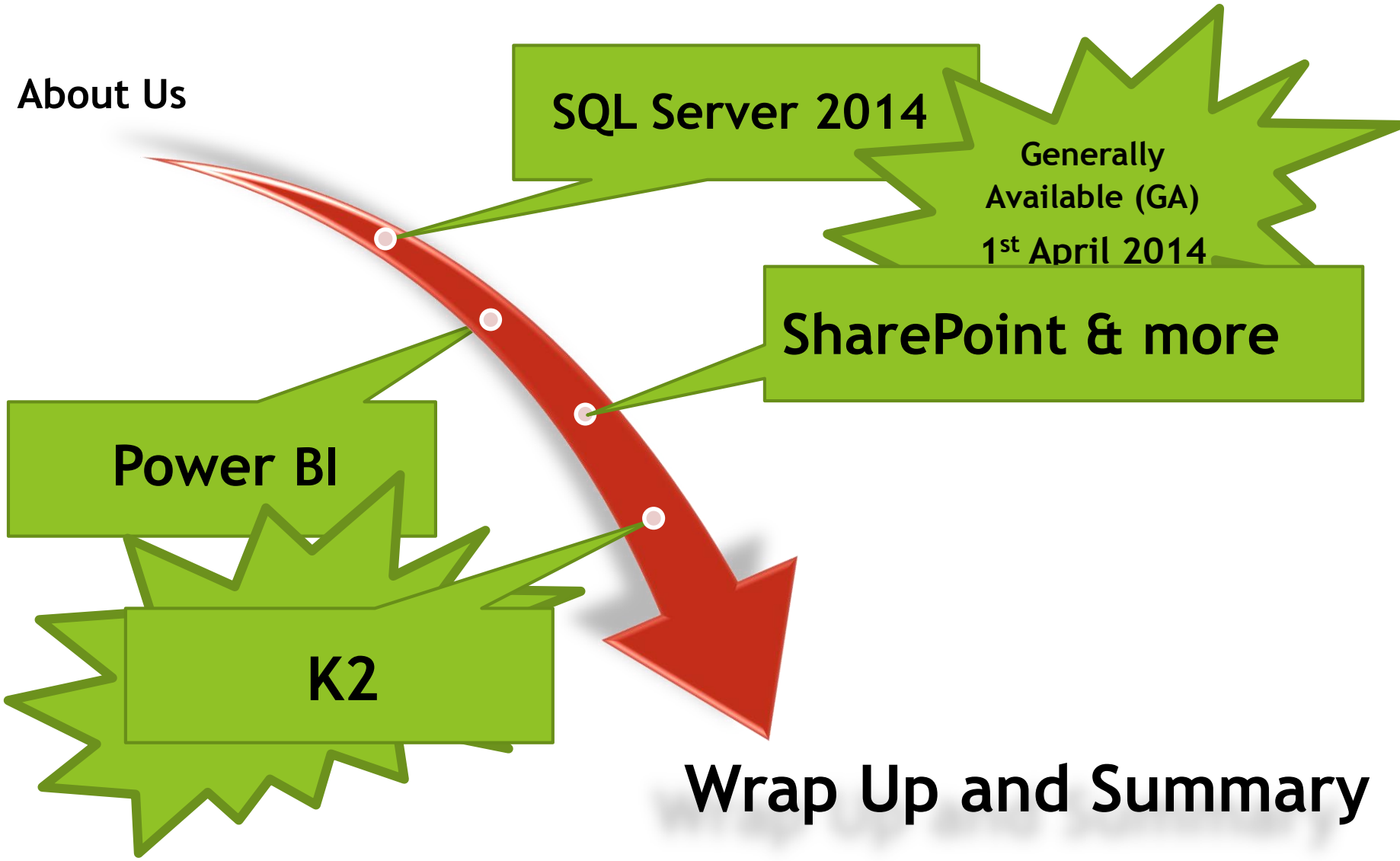

Agenda

What did we cover today?

- ✓ **SQL Server 2014** – Top 5 Features
- ✓ **Power BI** – Top 5 Features
- ✓ **SharePoint & more** – Social, Yammer & Forms!
- ✓ **K2** – Top Announcements

Appendix and References

Appendix

References

Appendix - References

- SQL Server 6.0, 6.5, 7.0, 2000, 2005, 2008, 2008 R2, 2012 and 2014 Books Online
  Microsoft

- Power BI (Power Map) available only to Office 365 customers from 30 May 2014
  http://www.office.microsoft.com/en-us/excel-help/power-map-for-excel-HA104204034.aspx

- Power BI App
  http://office.microsoft.com/en-us/office365-sharepoint-online-enterprise-help/faq-about-the-power-bi-app-HA104095891.aspx?CTT=5&origin=HA104095846

- SQL 2014 Hekaton
  http://channel9.msdn.com/Events/TechEd/Australia/2013/DBI226
  http://www.mssqltips.com/sqlservertip/3106/sql-server-2014-inmemory-oltp-architecture-and-data-storage/

- Microsoft Support Lifecycle FAQ
  http://support.microsoft.com/gp/lifepolicy