What is Data Warehousing (DW) & Business Intelligence (BI)?
Who are the users of these solutions?
What are the core products and deployment architectures?
What are some project and implementation best practices?
VCS solution and case study
Agenda
What are we going to discuss today?

About Us
Overview of DW / BI and its Users
DW / BI Products and Architectures
DW / BI Projects and Best Practices
VCS Case Study
What is Business Intelligence (BI)?
A refresher definition to get us all into the right mindset

Business Intelligence (BI), in its most basic sense, is delivering meaningful, accurate, and timely information drawn from diverse sources to support an informed decision making process.

...and recent business trends indicate it must be... flexible, fun, collaborative and at all levels in a business.
Who are the Typical Users?
Who uses DW / BI solutions, and what do they do?

Level 1
Consumers
aka “Information Worker”
(85 - 90%)

Level 2
Power Users
(5 - 10%)

Level 3
Developers
(0 - 5%)

Data Stewards?

**Business Group**
- Report Usage & Subscription
- Data Analysis Usage
- Collaborate and “Socialise”

**Business Group**
- Basic Report Authoring
- Complex Data Analysis
- Collaborate and “Socialise”
- Mentoring / Evangelists

**IT Group**
- Environment Establishment
- Data and Platforms Management
- Complex Report Development
- Data Model Development

**SharePoint 2013 or SharePoint Office 365**
- Build & Deploy
- Consume

**SQL Server 2012 EDW, SSAS, SSRS**
- Build & Deploy
- Consume

**SSDT**
(aka Visual Studio)
- Build & Deploy
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Microsoft Core Products - Breakdown

What are the components of the Microsoft DW / BI offering?

Another Version of Truth?
Typical “End-to-End” Enterprise Architecture

How are the Microsoft DW / BI technologies deployed?

Source Systems:
- Oracle
- Microsoft Dynamics
- IBM
- SAP

ETL (Integration Services) (StreamInsight [CEP])

Data Warehouse (SQL Server) (Fast Track) (PDW)
- Single Version of Truth
- Cube(s) or Tabular
- OLAP Analysis & Data Mining (Analysis Services)
- Report(s)

Source Database
Stage Database
Data Warehouse

Master Data Services (MDS)
Data Quality Services (DQS)

Load
Transform
Clean Data
Load

Presentation / Collaboration / Personal BI
- Excel:
  - Pivots, Data Mining, Power BI
- SharePoint:
  - Reports/Builder, Scorecards, Dashboards

ETL (Integration Services)
(StreamInsight [CEP])

Typical “End-to-End” Enterprise Architecture

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Typical phases of a DW / BI project

What steps are typically taken for rollout of DW / BI?

1. **Identification** of business and/or technical requirement or need
2. **Proof of Concept** (PoC)
3. **Requirements** identification, gathering, planning and design
4. **Development**, test and deployment
5. **Support**, review and respond

**Go to Market** for Tender Process

**Skip**

**Iterate**

**Repeat**
How to ensure BI project success?

Some Critical Things to Consider...

1. Ensure senior executive sponsorship is provided and communicated
2. Select the right team and skills for the project (mix of technical and business)
3. Involve power users (assign project deliverables & ensure ownership)
4. Capture all requirements, deliver an agreed prioritised subset
5. Ensure deliverables are surfaced at regular intervals
6. Get the Data Right (understand data sources, data modelling, ETL, …)
How to ensure BI project success?

Critical Things to avoid...

Don’t be sold on **vendor visual noise** (output needs to be **clear, concise, simple**)

Don’t rollout **legacy software** b/c of SOE (use the **later** product releases)

Don’t **outsource** the entire project (it needs to have **awareness internally**)

Don’t **assume** the solution is “**complete**” **after delivery** (expect changes)
About Us

Overview of DW / BI and its Users

DW / BI Products and Architectures

DW / BI Projects and Best Practices

VCS Case Study
Microsoft BI Case Study - VCS
Full End-to-End Microsoft SQL Server BI Solution - Architecture

Business and Technical Goals/Drivers
1. Reduce IT time spent authoring reports
2. Minimise impacts to OLTP systems
3. Provide data collaboration and sharing
4. Provide direct/decentralised access to core OLTP business data to support tactical information requirements, support requests and research

Approach and Implementation
1. Provision 3x new SQL 2008 R2 x64 VM’s
2. Develop ETL to obtain OLTP data daily
3. Develop DW to stage and store all data
4. Develop Cubes to aggregate DW data
5. Develop a set of standard SSRS reports
6. Develop SharePoint site for BI collaboration
7. Provide Self-Service BI via Excel 2010 and SSRS Report Builder 3.0
Microsoft DW / BI Case Study - VCS

Panel Questions

Victorian Cytology Service (VCS)

- OLTP Systems
- 2x ETL (daily)
- SQL DW Databases
  - SSRS Databases
  - SSAS Cubes
- 5x Cube Build (daily)
- Power User: Excel
- 12x SSRS Reports
  - 5x Dashboards
- SharePoint WFE
- SSRS WFE
- Power User: Report Builder
- Consumer: SharePoint

SharePoint Databases
Microsoft DW / BI Case Study - VCS
Panel Questions - Definition

1. What were some of the key issues, risks or concerns facing the business that BI/DW technology solution could solve?

2. What was the high level process the business went through to go to Market with an RFP/I?

3. What were some of the measurable outcomes and critical success factors the business required?

4. [What were the main features/services that the business wanted the BI solution to provide?]
Microsoft DW / BI Case Study - VCS
Panel Questions - Response

1. What other BI platforms were considered? Why did the business choose the Microsoft BI platform?

2. On what key aspects did the business choose a suitable Microsoft BI technology partner to help deliver the BI solution?
Microsoft DW / BI Case Study - VCS
Panel Questions - Development

1. How did the business manage internal stakeholder expectations in regards to the BI project deliverables / timelines as the project progressed?

2. Were the business senior business executives, such as the CEO, and senior Directors both supportive of the solution and willing to be involved?

3. [How much influence, involvement and direction did the business have During scoping and delivery of the BI solution?]

4. Were any significant issues encountered during the project delivery? If so how were these resolved?
Microsoft DW / BI Case Study - VCS
Panel Questions - Delivery

1. Did the BI project deliver on the technical / business expectations and stated objectives?

2. Were the stakeholders satisfied with the outcome?

3. [Is the BI system being used to its full potential?]
Microsoft DW / BI Case Study - VCS
Panel Questions - Future

1. What does the business see as the next area of improvement for the BI system?

2. If the business were to go through another BI project, what would the business do differently 2nd time round?
Agenda
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Appendix & References
Appendix - SharePoint 2013 Features
Sites, Functionality and Capabilities
Appendix - References

- SQL 2012 Books Online
  Microsoft
- Microsoft BI Portal
  www.microsoft.com/bi
- Gartner Magic Quadrant for Business Intelligence Platforms
  http://www.gartner.com/technology/reprints.do?id=1-1DZLPEP&ct=130207&st=sb
- Gartner Magic Quadrant for Data Warehouse Platforms
  http://www.gartner.com/technology/reprints.do?id=1-1DU2VD4&ct=130131&st=sb
- Power BI for Office 365
  http://cwebbbi.wordpress.com/2013/08/22/power-bi-news-roundup
- SQL 2012 BISM
- Top 10 Best Development Best Practices for Building SQL DW
- OData
  http://www.odata.org/
- List of Microsoft Project Code Names
- Download: SQL Server 2012 SP1 CU4
  http://support.microsoft.com/kb/2833645
- Power BI for Office 365 Demonstration
  http://www.youtube.com/watch?v=Jsa-5LGx_IY
- Comparing the Various Flavours of SSAS Models
- Fast Track Data Warehouse