



BI deployment best practices

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Speakers:

Jeff Strauss

Tim Rodine

Ilya Blyakhman

Alex Timberg

Allstate Insurance at a Glance



The Allstate Corporation is the nation’s largest publicly held personal lines insurer.

A fortune 100 company with \$132.7 billion in assets.

Allstate sells 13 major lines of insurance, including auto, property, life and commercial. Allstate also offers retirement and investment products and banking services.

Allstate is widely known through the “You’re In Good Hands With Allstate®” slogan.

The Allstate Corporation encompasses more than 70,000 professionals with technology operations located around the globe.

Allstate is reinventing protection and retirement to help individuals in approximately 17 million households protect what they have today and better prepare for tomorrow.

Allstate Insurance at a Glance



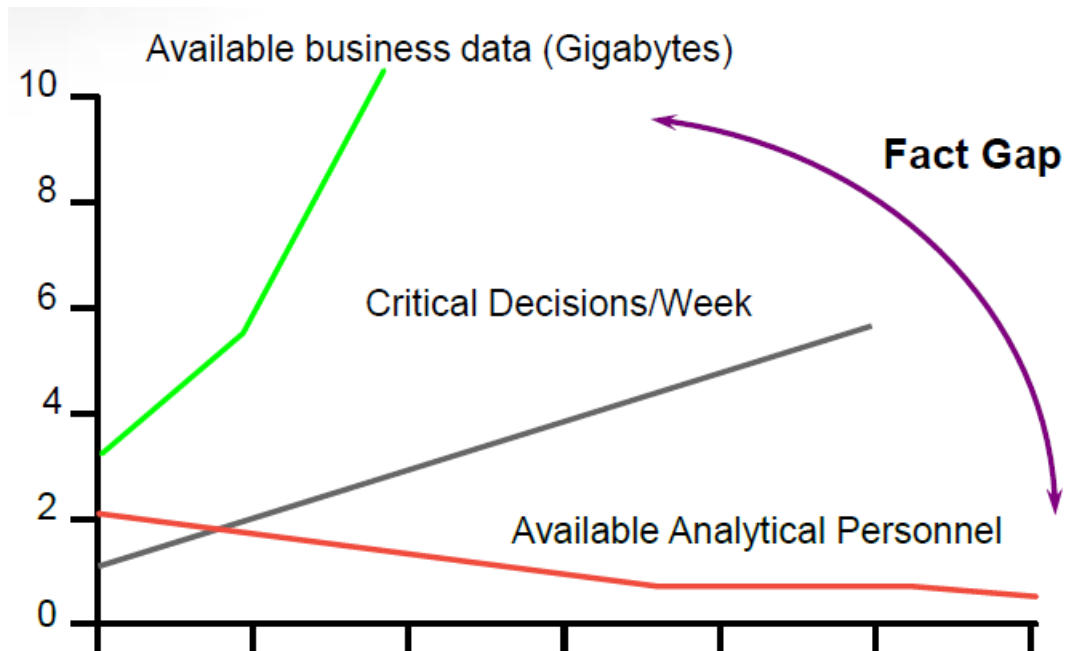
Allstate's Technology Environment

- 4,000+ IT professionals
- 5,000+ software applications
- 100,000+ desktop computers supported
- Multiple operating systems
- Multiple technology platforms
- Multiple database systems

Applications and Services

- Advanced Analytics
- Business Process Management
- Capacity Planning
- Data Warehousing
- Document Imaging
- Enterprise Content Management
- Enterprise Databases
- Enterprise Information Integration
- ETL (Extract, Transform, Load) Tools
- Financial Applications
- High-Availability and Disaster Recovery
- High-Speed Networking
- Integration Architecture
- J2EE and .Net
- Large Scale Networks
- Message Brokering
- Performance Management
- Rich Media Management
- Service Oriented Architecture
- Unix, Windows and Mainframe platforms
- Web Content Management
- Web Services

The problem





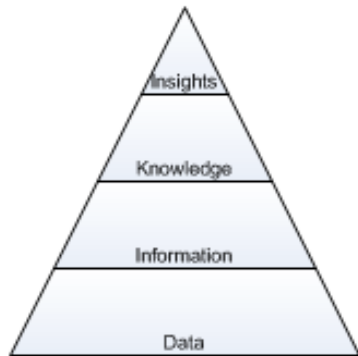
The solution



- **Architecture design**
 - Data optimization
 - Interface use cases
- **Shared space**
 - Communications
 - Templates
 - Visualizations
- **Document integration and linking**
 - OpenDocument
- **Availability**
 - DR resiliency
 - Scheduling



Arch design: Data optimization



• Data sourcing

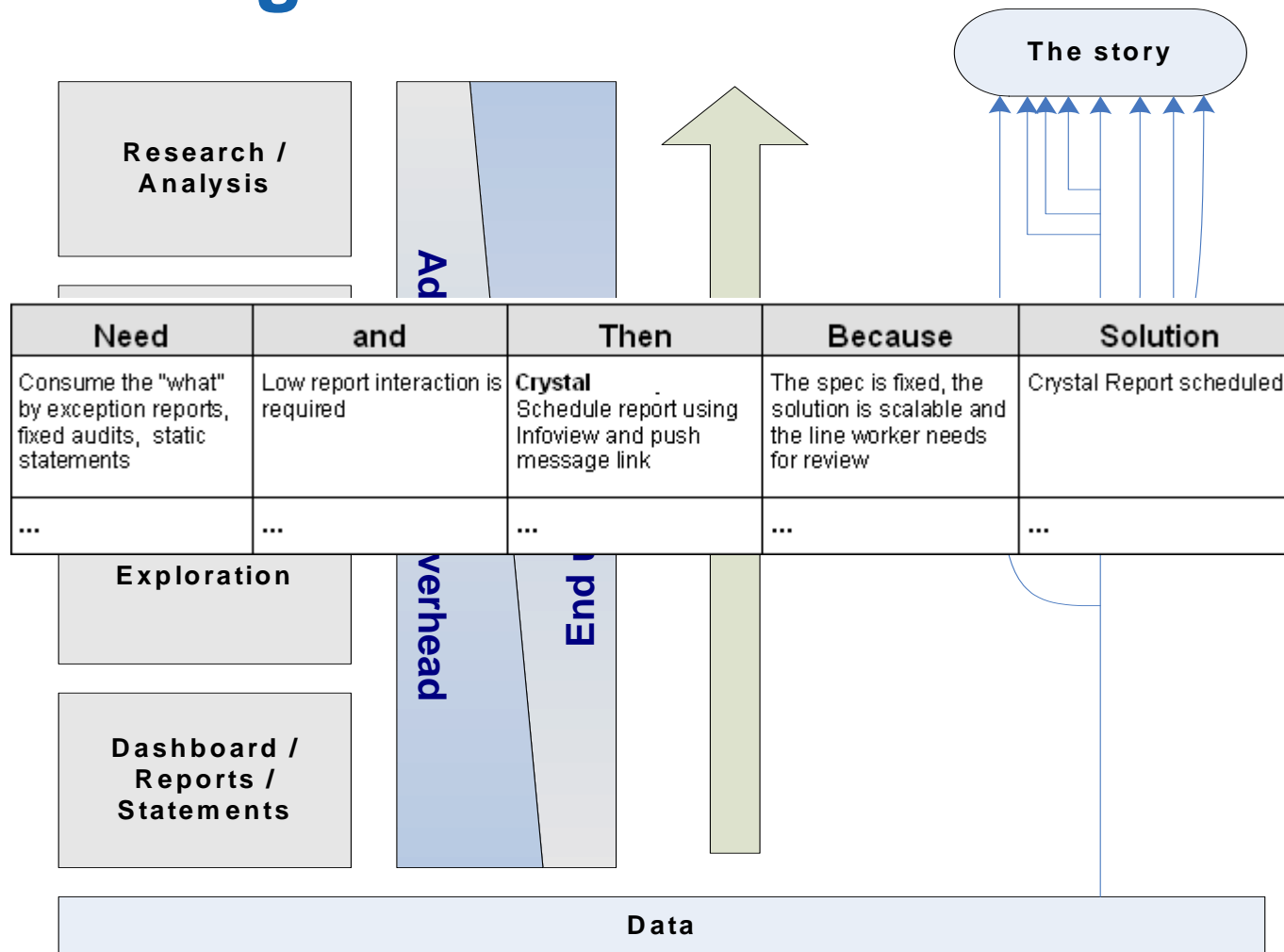
- When to warehouse the data, when to use SoR, and when to go somewhere in between
 - Mission criticality, Currency, Accuracy, Integration
- Strong metadata

• Data structures

Structure	Short description	Use case
Logical view (1a)	Logical RDBMS representation of one or more tables joined together	
Derived table (1b) (Nested inline query)	Business Objects universe construct that is a logical formulated view of one to many relational tables.	<ul style="list-style-type: none"> • Embedded non-reusable focused business logic • Ability to have an in-line reporting prompt
Materialized view (2a)	Physical RDBMS representation of one or more tables joined together	
Denormalized table (2b)	A stand-alone DB table with all columns necessary to support a given report, or series of reports	<ul style="list-style-type: none"> • Good for standard reporting / dashboards when the underlying 3NF structure does not provide for effective query performance
Star schema (3) (Dimensional model)		



Arch design: Interface use cases



Central Site with Guides and Standards



EBIT Home Page

Home BO Universe/WebI Crystal Reports Xcelsius BOE Integration

This Site [dropdown] [input] Site Ad [input]

View All Site Content

Surveys

- Xcelsius Training Survey

About BI COE

- EBIT
- Contacts

Processes

- On-boarding
- Training
- Project Forms
- Issue & Defect Mgt
- SLA
- TODOs

Document Library

- Document Library

Tools and Access to Environments

- Tools We support
- APAD Packages
- Access to Reporting Environments

Links and Shortcuts

- Client Support
- Client Support FAQ
- Architecture

Discussions

- Business Objects Developers Group

Sites

People and Groups

This is EBIT home page

News

Who we are?

EBIT - Enterprise Business Intelligence Team
 EBIT is the business intelligence(BI) competency center across the Allstate enterprise. The team serves as the central area of knowledge, expertise and best practices regarding reporting, analytics and OLAP. [\[more\]](#)

APAD Packages
[APAD package summary](#)

Tools We Support

Type	Name	Modified By
Add new document		

Tip of the day

It is easy to find documents and forms using search (upper right corner)

Quick Links

- [OpenDocument BOE](#)
- [Xcelsius Templates and Documentation](#)
-
-
-
-

Access to Business Objects Enterprise (BOE)

BOE	InfoView	CMC
Development (BODEV)		
Staging/UAT (BOUAT)		
Production (BO)		

Note: [Access to BusinessObjects Enterprise Environments](#) provides BOE CMC login instruction for Non-mast_hodc domain users.

Access to all BI tools

Type	Name	Modified By
	Access to BusinessObjects Enterprise Environments	

Add new document

Contacts

Last Name	First Name	Business Phone	E-mail Address
Add new document			

Handbooks for Allstate Best Practices / Reference



EBIT Home Page > Document Library > BusinessObjects Universe, Web and Desktop Intelligence Design

Document Library

To Open link in a new window hold SHIFT key and then click on the link.

To preview CHM file save it to your local hard drive and open it from that location.

New | Upload | Actions | Settings

Type	Name	Document type	Modified By
		Guide	
		Guide	
	BusinessObjects Universe Designer User's Guide	Guide	
	Analysis with Web Intelligence	Guide	
	Building Reports Using the Web Intelligence	Guide	
	Document a Universe	Technical Documentation	
		Guide	
		Technical Documentation	
	Universe Development Guide	Technical Documentation	
	BusinessObjects Universe and Web Intelligence Developer's Handbook	Guide	

Streamlining with Standardized Templates



Implements Templated Reports for each tool (Webi/Crystal/Deski/XC)

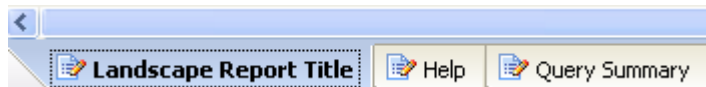
- Common Look and Feel

LOGO

Report Template - Landscape Report Version: -A
Run Date: 10:05:36 AM GMT-04:00
Page: 1/1

Report Title

- Base tabs on report



- Set up for Ad Hoc usage already pointing to Universe

Streamlining with Standardized Templates



Helps with Support and Adoption

- Report Version (do you have the current version of the report)
- Help: Provides context to the data and hopefully avoids questions
- Query Summary: Provides details on the queries

Visualizations Best Practices



Xcelsius Style Guide

- Colors, fonts...
- Common Navigation
- Best use of Visuals and colors
- Components to Avoid
- Difference between a Dashboard, Scorecard, Report or Application

Templates for Monitoring Usage



XXXX Report Version: -A

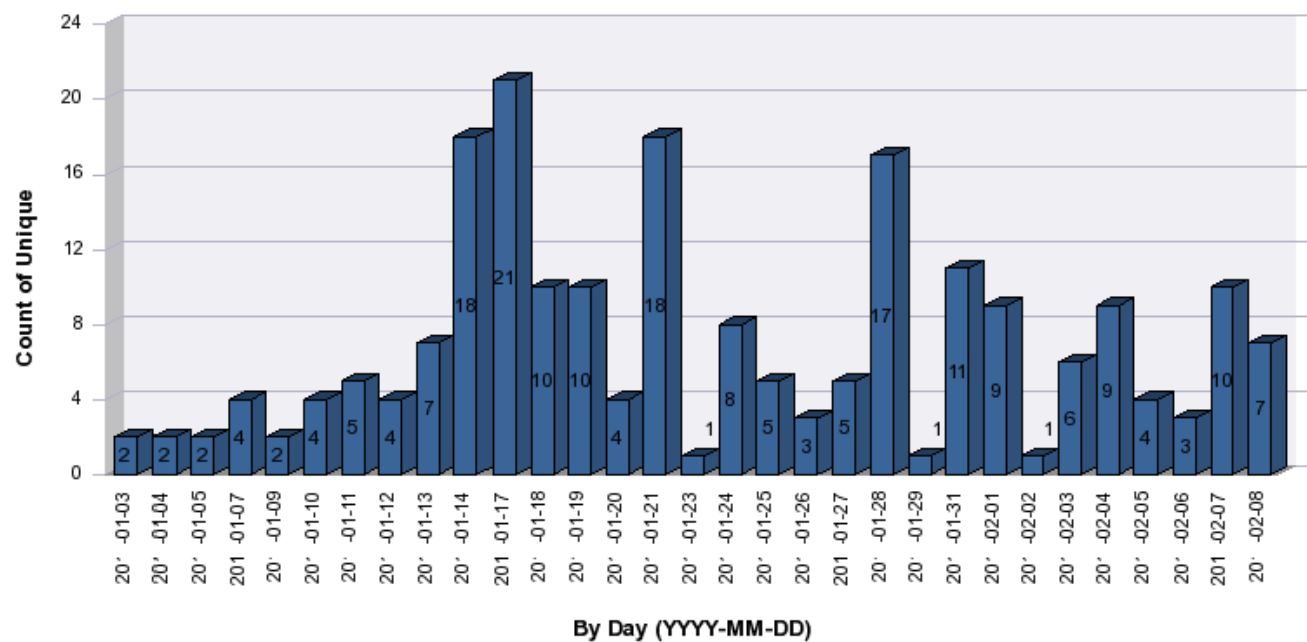
Run Date:

Page: 1/1

Action YYYY-MM	Count of Unique
20 -01	79
20 -02	38

Usage of the XXXXXXXXXXXX

The data to the left is a total of unique users who have access the reports within the month. On the graph below the user will be counted on each day they would access a report. Therefore the graph will have a higher count and show overall usage where the count to the right is the total number of users access the reports within a month.



OpenDocument best practices



Key benefits

- Universal: OpenDocument can open document hosted in BOE
- Efficient: Cuts number of steps required to run report in InfoView. No need to navigate to report, select prompts, select export format etc
- Flexible: Gives ability “hard-code” prompts value in URL and provides user with interactive prompts
- Simple Format: OpenDocument format is readable and relatively easy to understand

OpenDocument best practices



Key benefits

- Distribution: URL can be embedded in to webpage, email or any office document
- No dependency on SDKs or Custom coding: usually not affected by BO upgrades
- Integration with other Application and Reports Linking: above benefits make it perfect vehicle for application integration and report integration for drill down, drill up and drill thru navigation
- When best practices followed easy to maintain and migrate between environments

OpenDocument best practices



Top 10 OpenDocument Best Practices

1. Use relative path in OpenDocument, i.e. omit server name when document is on the same server/cluster/VIP
2. Avoid use of document Ids. Use document name and path to the folder
3. Do not mix Ids and Name/Path notations
4. Do URL encoding for OpenDocument parameters you cannot control
5. For Java deployments: Keep in mind that URLs are case sensitive
6. URL limit is 2083 characters. BO rewrites URL, so test OpenDocument URL
7. Parameters set for report in CMS cannot be overridden in OpenDocument
8. Use SSO if possible
9. Define and Publish your organization OpenDocument Best Practices/Guide to central location
10. Educate Developers and End Users

Scheduling Errors



Instance Manager – BO Admin’s Best Friend

- Much better than in XIR2, but still room for improvements
- Check daily, identify and address issues
- Identified and catalogued almost 50 different errors:
 - Table with error text, category, typical reason, action, standard email
 - Three categories (responsible parties):
 - User – 50%, persistent emails do wonders
 - Application – 30%, work with app teams
 - System – 20%, often indication of serious trouble that requires immediate attention
 - Disclaimer: ***Error table has not been reviewed/approved by SAP/BO. The research was done in house and there is no guarantee of accuracy.***

Scheduling Errors



User error – example 1

- address error. [Error sending address(es) to SMTP server. Return code: [SMTP 550 - Requested action not taken: mailbox unavailable.

Typical Reason

- Invalid email address in the target list. The address must be entered in standard format
- May also happen when the user receiving the report leaves the company.

Action

- Send standard email to the scheduling user

Scheduling Errors



Standard email example

Hello,

You are receiving this email because your Business Objects/Crystal report [*report name*] keeps failing with the following error:
address error. [Error sending address(es) to SMTP server. Return code: [SMTP 550 - Requested action not taken: mailbox unavailable].

This failure is caused by an invalid email address in the report delivery list. Please remove or correct the invalid address and reschedule the report. The address must be entered in the standard format.

Regards,

Scheduling Errors



User error – example 2

- login error. [Logon failure: unknown user name or bad password.]:
[CrystalEnterprise.DiskUnmanaged]

Typical Reason

- Password provided in the schedule expired
- Report output scheduled to a folder to which admin account has no access and no valid id/pass is provided

Action

- Send standard email to the scheduling user

Scheduling Errors



Standard email example

Hello,

You are receiving this email because your Business Objects/Crystal report [*report name*] keeps failing with the following error:

*login error. [Logon failure: unknown user name or bad password.]:
[CrystalEnterprise.DiskUnmanaged]*

The reason for this failure is the lack of access to the share to which you are sending the report. Please provide the valid id/password in the Destination section of the scheduler and reschedule the report. The id must have permission to write to the share.

Alternatively, you may make the share accessible to BO Administrator group, which includes the accounts running Business Objects services. In that case no id/password needs to be entered and there is no need to reschedule reports when the password changes.

Regards,

Scheduling Errors



User error – example 3

- write error. [Error sending mail message to SMTP server. Return code: []]: [CrystalEnterprise.Smtp]

Typical Reason

- Output file too large to send via email

Action

- Send standard email to the scheduling user

Scheduling Errors



Application error – example 1

- A database error occurred. The database error text is....

Typical Reason

- Database error. May be caused by an issue with the universe design or processing on the DB. The error message usually provides more details, i.e. The database error text is: ORA-00932: inconsistent datatypes: expected - got CLOB

Action

- Contact the application group responsible for the universe and request investigation and/or correction. DBA's involvement may be required

Scheduling Errors



Application error – example 2

- Error in File ~tmp444066a4870aa89.rpt: Error in formula...

Typical Reason

- Error in CR code. The error message usually provides more details, i.e. Error in formula Record Selection: '(' The string is non-numeric.

Action

- Contact the application group responsible for the report and request correction.

Scheduling Errors



System error – example 1

- login error. [Not a valid logon token. (FWB 00003)]:
[CrystalEnterprise.Managed]

Typical Reason

- Job server processing the report lost its connection with CMS. This may happen when one of CMS servers stopped or was rebooted.
- Usually these errors will congregate with common job start time. The time will coincide with the CMS issue.

Action

- Verify that all CMS servers recovered and are functioning properly.
- The report must be rescheduled.

Scheduling Errors



System error – example 2

- Object could not be scheduled

Typical Reason

- This error is usually associated with the event log error on CMS server: “Internal error while trying to send a job to jobserver”. This may be a symptom of the CMS node becoming unstable.

Action

- If the error persists, the failing CMS server should be restarted and failed reports rescheduled.

Scheduling Errors



System error – example 3

- The Web Intelligence server cannot be reached. Contact your Business Objects administrator. (Error: RWI 00236)

Typical Reason

- Communication error between CMS, job and processing server; often associated with clustering errors on CMS.
- Often the error is limited to a specific processing server.
- Usually in multiples.

Action

- Disable and restart the failing processing server.
- The report(s) must be rescheduled.

Questions

