

WCB-Alberta Business Intelligence & Analytic Framework :

Aiming for Insight, Optimization and
Rational Decision Making

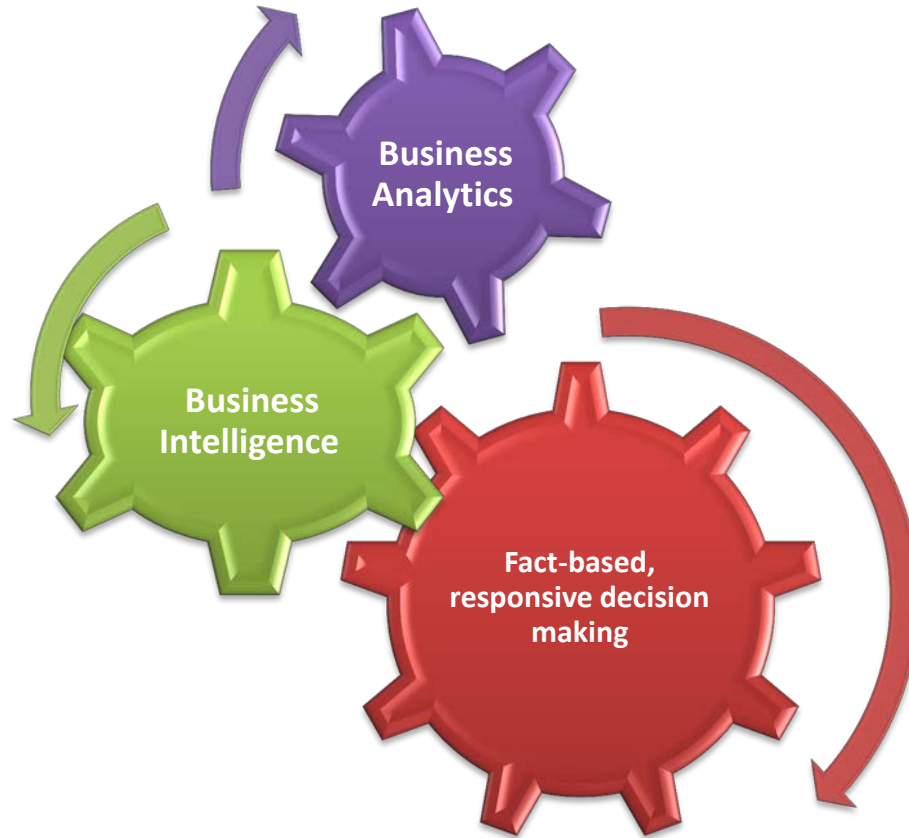
November 12, 2013



Workers'
Compensation
Board

Alberta

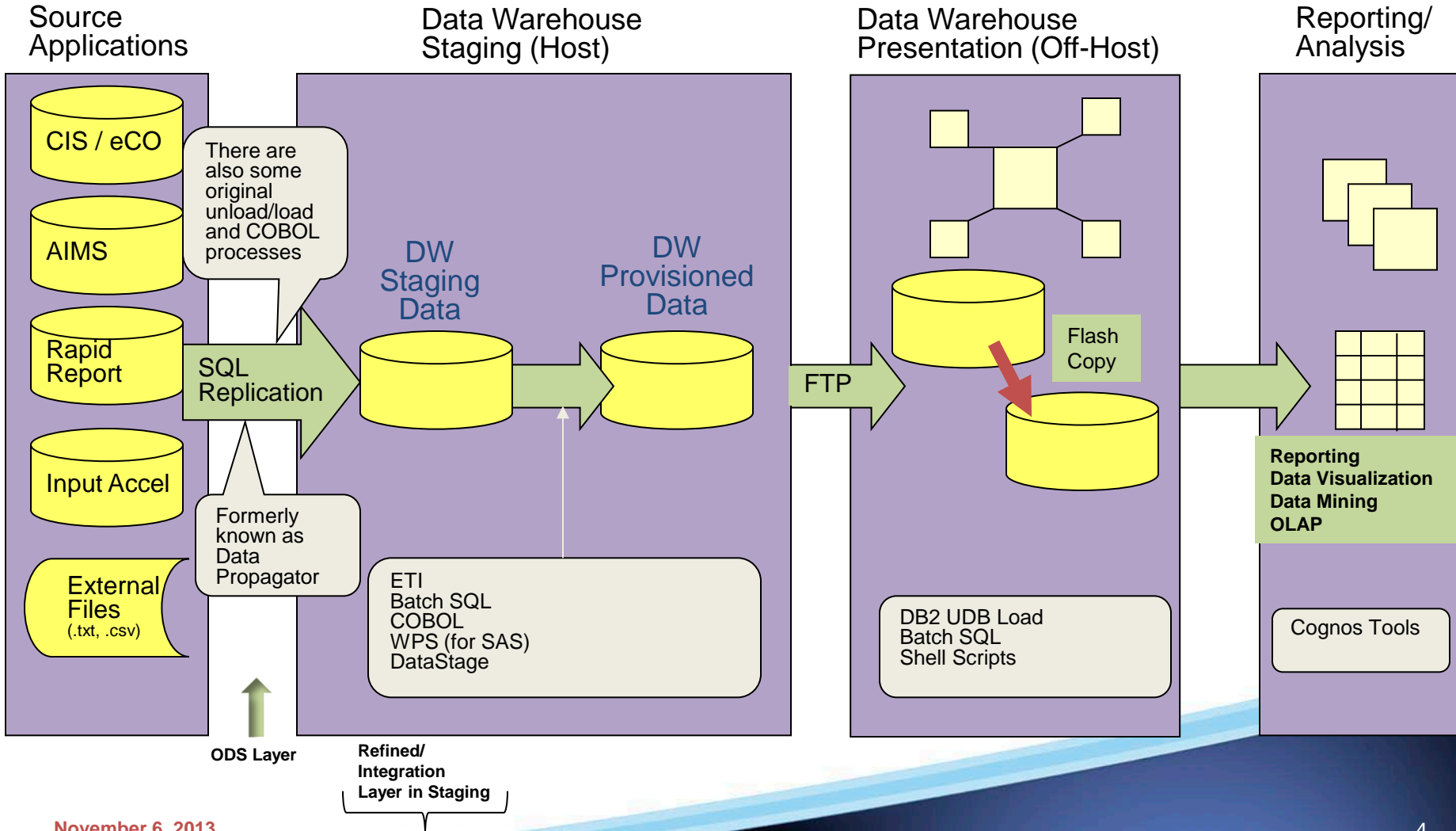
BI/BA – Our Philosophy



Data Warehouse – The Journey

- DW piloted in 1999
 - COBOL, system utilities
 - CIS & AIMS
 - eCO 2000
- ETL tools in 2000
 - DATA PROPAGATOR (IBM SQL Replication)
 - ETI*EXTRACT (ETI Solution)
- IMB's DataStage in 2010
 - New enterprise ETL tool
 - Provision new data
 - Numerous data sources
- Cognos 8.4.2
 - Query, analysis, report and metric studios

DW– Current Architecture



DW– Application

- Leverage our information and knowledge assets to make good decisions:
 - Disability Management
 - Return-to-work, claim duration, modified work, vocational rehab, etc.
 - Financial Management
 - Financial reporting
 - Cost forecasting, annual budgeting and planning
 - Monitoring of investment performance
 - Valuation of the claim benefit liabilities, cost studies, industry premium rates, etc.
 - Account Management
 - Employer performance (experience) & cost management, custom pricing, injury reduction programming (PIR), etc.
- Relevant, timely, and reliable information
 - Performance tracking and monitoring
 - Team-to-Corporate level tracking and monitoring
 - Information relay chain & loop: Supervisor <> Manager <> Executive <> Board
 - KPI's, Corporate Scorecard Measures
 - Decision fairness, Wage quality, Duration, Fitness for work, etc.

DW– Application

- DW has grown 10x original size:
 - Primary source for enterprise reporting, including management & financial reporting, historical analysis, operational and dashboard style reporting
- 750+ internal business users
- Claims related information most common/most consumed
- Over 700 published products (cubes, reports, dashboards, and metrics)
 - Subject areas:
 - Financial Services
 - Healthcare Services
 - Case Management
 - Claims Audit
 - Quality Assurance, etc.
- Many users view summary dashboards daily
- 28 Corporate, Divisional & Unit scorecards supported by DW

Healthcare: Hospital Cube

File Edit View Settings Run Help



Insertable Objects

- [-] Prior YTD
 - [+] YTD Grouped
- [+] All Clinic Base / Billing Numbers (50+)
- [+] All Days of Service - On and After DOA
- [+] All Payment Statuses
- [+] All TOP/NOPs
- [+] All NOIs (45)
- [+] All POBs (43)
- [+] All RHA Service Provider Locations at Time of Service
- [+] All RHA IWK Locations at Time of Service
- [+] All Claims
- [+] All Duration Years
- [-] All Duration Years (1-7 & 8+ Grouping)
 - [+] (Blank)
 - [+] 0
 - [+] 1
 - [+] 2
 - [+] 3
 - [+] 4
 - [+] 5
 - [+] 6
 - [+] 7
 - [+] 8+
- [+] All Duration Years (Benefit Liability Grouping)
- [-] Measures
 - [+] Pmt Amt
 - [+] # of Svcs
 - [+] # Days Svc to Pmt

Rows:

AB

Columns:

2013

Context filter:

Back/spine

\$ / Svc	2013 Q 1	2013 Q 2	2013 Q 3	2013 Q 4	2013
ASPEN HEALTH REGION	349.69	311.60	341.97	287.00	336.50
CALGARY HEALTH REGION	688.83	985.02	569.87	287.00	744.36
CAPITAL HEALTH REGION	499.45	496.74	447.34	287.00	483.49
CHINOOK HEALTH REGION	405.00	326.04	349.18	287.00	360.21
DAVID THOMPSON HEALTH REGION	483.82	755.69	289.79	287.00	513.66
EAST CENTRAL HEALTH	609.57	287.00	287.00	/0	411.53
NORTHERN LIGHTS HEALTH REGION	270.00	357.28	284.50	/0	297.70
PALLISER HEALTH REGION	284.75	7,967.81	287.00	/0	2,552.57
PEACE COUNTRY HEALTH REGION	292.66	362.15	334.83	287.00	325.95
PIGEON LAKE 138A	270.00	/0	287.00	/0	275.67
AB	486.46	920.33	411.61	287.00	603.15

Search - All NOIs

Search in the selected item. You can drag the results into the work area.

Selection: All NOIs

Keyword:

cut

Stop

Search

Results: "cut" in All NOIs

Name

Cuts/abrasions/bruises

Cut/laceration

Finance: Investment Dashboard

Reference Document List

- [Annual Investment Report](#)
- [Investment Mgmt Strategic Plan](#)
- [Investment Policy](#)
- [Funding Policy](#)
- [Investment Dept SOP](#)
- [Investment Mthly Stats](#)
- [Qtrly Manager Review](#)
- [Annual Manager Review](#)
- [Mthly Internal Mgt Report](#)
- [Investment Department Project Plan](#)
- [Investment Dept Scorecard](#)
- [Investment Dept Project Status Rep](#)
- [Finance Committee Annual Plan](#)
- [Investment Mandates](#)

Funded Ratio and Market Value

- ▶ **Funded Ratio (%)** (as at Nov 1, 2013)
 - [136.9%](#)
- ▶ **Market Value (\$)** (as at Nov 1, 2013)
 - \$9,142,546,745.00
- ▶ **Liquidity (\$)** (as at Oct 17, 2013)

Cash	\$428,967,882.00	Cash Forecast
Government Bonds	\$817,848,057.00	Liquidity Report

Compliance

- ▶ **Asset Mix** (as at November 1, 2013)
 - [Yellow](#) [Proxy NAV](#)
- ▶ **Policy** (as at September 30, 2013) (Y/N)
 - [Yes](#) [Qtrly Monitoring Rpt](#)
- ▶ **Contractual** (as at September 30, 2013) (Y/N)
 - [Yes](#) [Contractual Compliance](#)
- ▶ **Fixed Income** (as at September 30, 2013) (Y/N)
 - [Yes](#) [Mthly F.I. Compliance](#)

Risk and Returns

(as at 30-Sep-13)

- ▶

	1 Yr	2 Yr	3 Yr	4 Yr	
Volatility	3.4%	3.6%	3.8%	4.1%	MthlyTW Rpt- Prelim
Benchmark	3.7%	3.8%	3.9%	4.1%	Mthly TW Rpt - Final
- ▶

	M	YTD	1 Yr	4 Yr	
Returns	1.5%	5.5%	8.1%	8.1%	Qtrly Perf Rpt
Benchmark	1.4%	3.8%	6.0%	6.8%	
- ▶ **Surplus VaR** (as at 30-Sep-13)

Actual		10.6%	Mthly Risk Report
Policy		9.9%	
- ▶ **Active VaR** (as at 30-Sep-13)

Actual		139 bps	
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Key Controls

- ▶ **Fixed Income Trade Review (Y/N)**
 - (as at Nov 1, 2013) [Yes](#) [Weekly F.I. Trade Review](#)
 - ▶ **Fixed Income Reconciliation (Y/N)**
 - (as at Sep 30, 2013) [Yes](#) [Mthly F. I. Reconcil](#)
 - ▶ **Ext Manager Reconciliation (Y/N)**
 - (as at Sep 30, 2013) [Yes](#) [Ext Mgr Reconcil](#)
 - ▶ **State Street Section 5970 (Y/N)**
 - (as at Sep 30, 2012) [Yes](#) [Section 5970](#)
- [Key Control Check List](#)

Executive: Key Drivers Dashboard

Executive Performance Dashboard



Executive Report Links

- [ELP Report](#)
- [Leading Indicators Report](#)
- [Medical Services Cycle Times Chart](#)
- [Caseload Composition Report](#)
- [The Path to Return to Work](#)
- [Finance Operations Reports](#)
- [FFW Letter Report](#)

Quick Hit Metrics

Overpayments As of 5/13/13

- Current Overpayment Balance **\$3,463,925.77**

Appeals Commission As of 5/13/13

- Issues Not Yet Complete Over 30 Days Old **66**

WCB Links

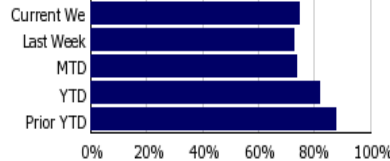
- [WCB Electronic Workplace](#)
- [WCB Home Page](#)
- [eCO](#)
- [Google](#)

By Subject Area

Name ▲
Access to Information
Account Management
Cantiva

Case Plan Update As of 5/13/13

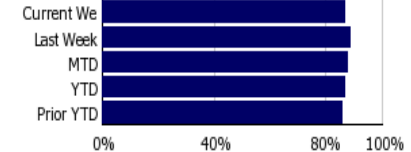
- % of Employees with 70% of letters on time



- % of staff w. more than 2 late letters
- % of letters last week in 42 day target **90.1%**

Reg to First Payment As of 5/15/13

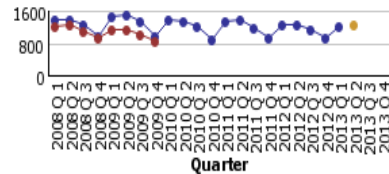
- % of Time Loss Claims RTP in 14 Days



- Teams Under 83% RTP YTD **6**

Duration As of 5/13/13

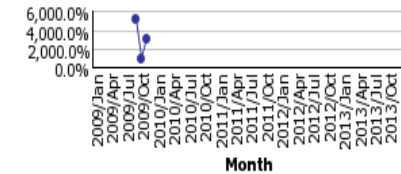
- 0.25+ Duration Claims



*Historical totals are pre-reconciled DW counts

Rollover vs. New TL Claims As of 5/13/13

- .15 to .25 Rollover vs New TL Claims (w 3 month lag)



NB: Duration totals are based on pre-reconciled DW counts

Overdue Tasks As of 5/13/13

- % of Tasks Complete Within 10 Days Overdue

New VR Payments As of 5/13/13

- New VR Payment Claim Volume

Metric Manager: Claims Management

← Sep 2013 → [Print] [Help]

CMM Package

Scorecards

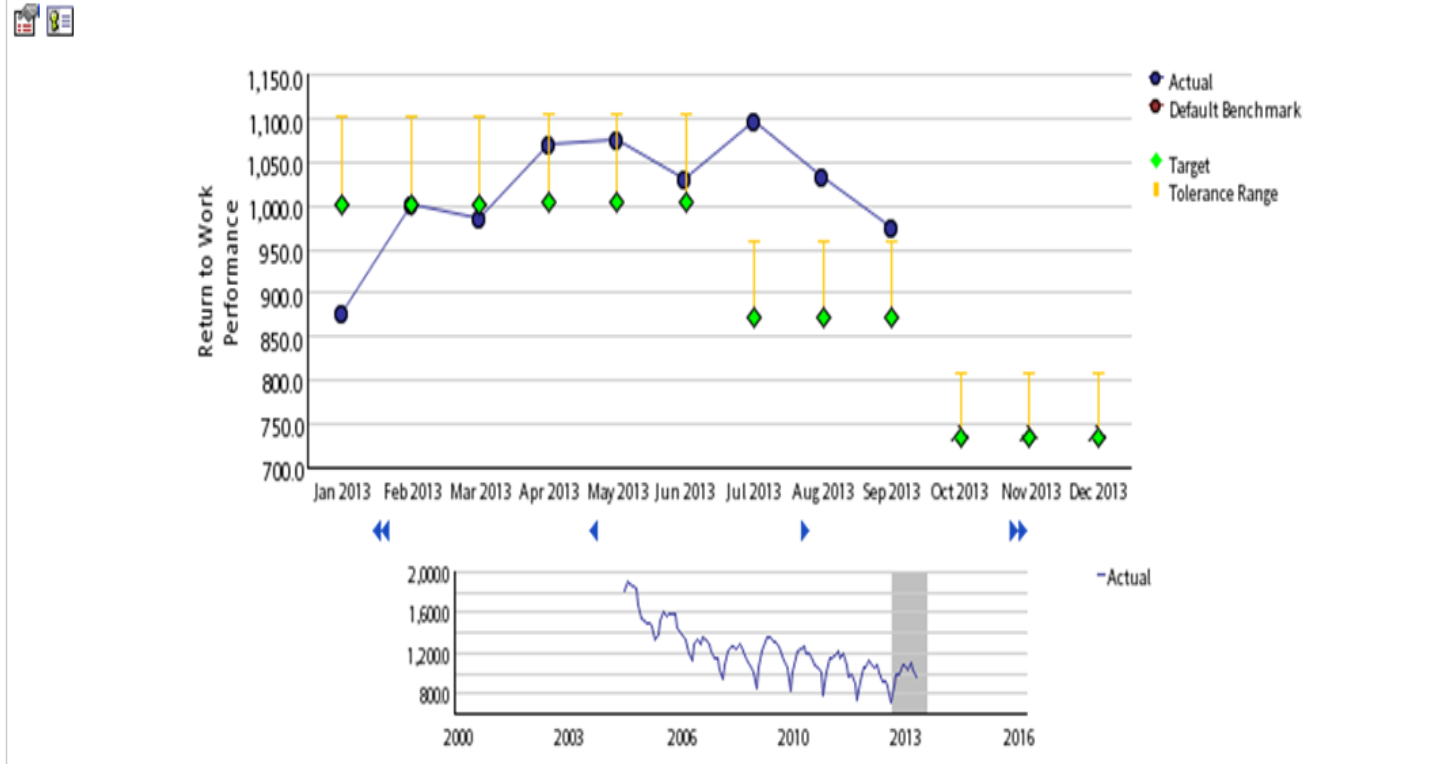
- Scorecards
 - All Metrics
 - WCB - Alberta
 - 2013 Corporate Scorecard
 - Corporate Risk Watch List
 - 2013 Operations Scorecard
 - Operations Risk Watch List
 - Case Management - Team Scorecard
 - Customer Service
 - Customer Service Support
 - DRDRB
 - Employee and Corporate Services
 - Environmental Influences
 - Financial Highlights
 - Health Care Services
- My Folders
- Scorecards
- Metric Types

Scorecards ▶ WCB - Alberta ▶ History ▶ 2006 ▶ 2006 Corporate Scorecard ▶
 Metric Types ▶ Return to Work Performance

RTW Performance--0.25 Year Duration Claims w [History] [Actions] [Reports] [Diagrams] [Info]

Status	Trend	Actual	Target	Variance	Owner	Last updated
■	▲	975.0	871.0	104.0	E970758	Oct 10, 2013

[Chart] [List]



Reporting: Financial Planning & Analysis



Finance Division

collaborative
strategic
innovative

- Welcome
- About Us
- Guidelines and Procedures
- Reports and Statements

Collapse All Expand All

Expense Reimbursement

Computer Purchase Program

Travel Accommodation and Subsistence

Levels of Authority

Corporate Insurance

Income Tax Preparation

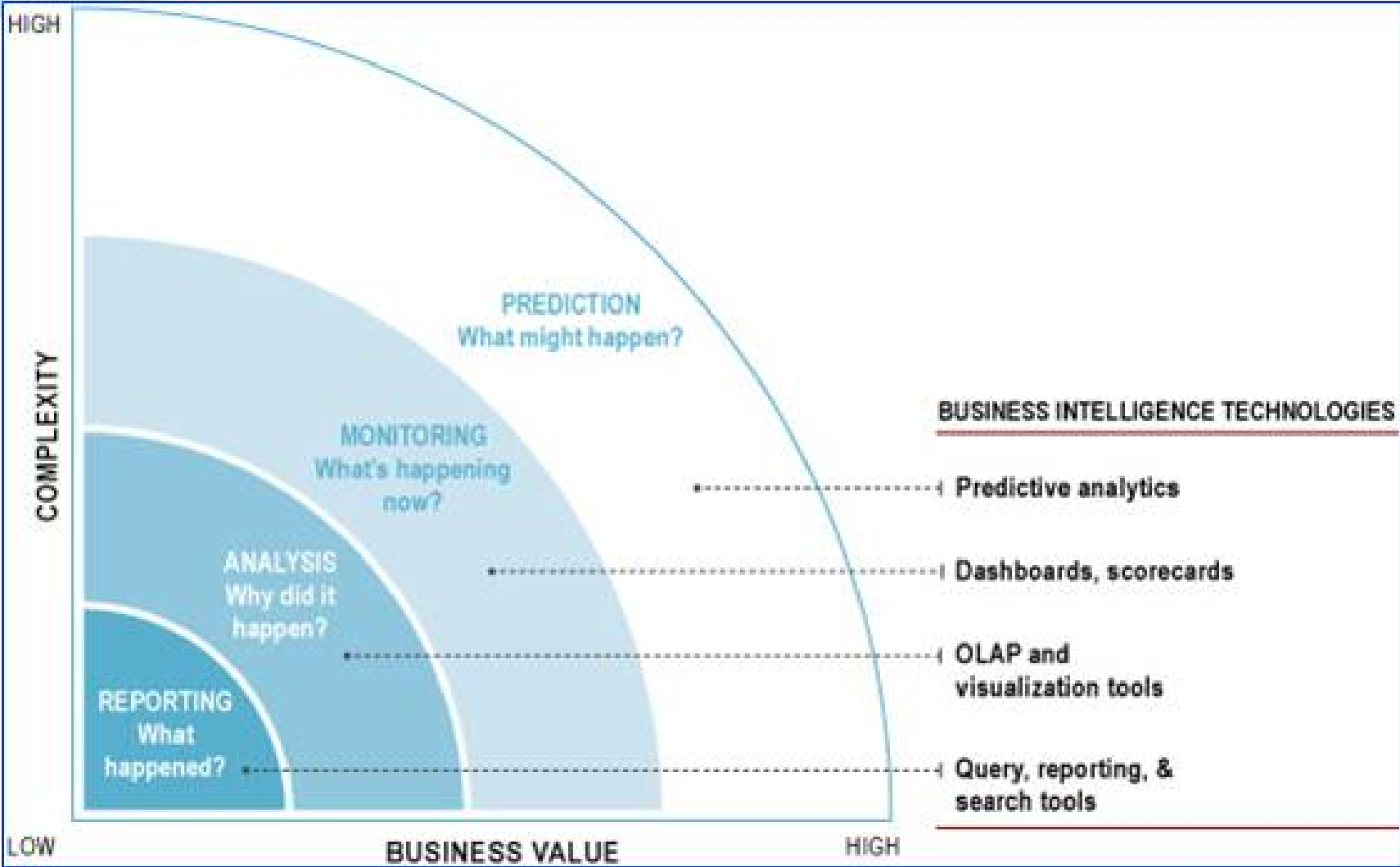
Operations Previous 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 ... Next

▼ 2013		
▼ 9		
Economic Loss Payments Reports		SMC,Managers,Directors
Health Care Subcategory Reports		SMC,Managers,Directors
IE and Premium Supplement		SMC,Managers,Directors
Monthly Statistical Information Package		SMC,Managers,Directors
Return to Work		SMC,Managers,Directors
Sector and Mid-Month Analysis Package		SMC,Managers,Directors
Temporary Total Disability Report		SMC,Managers,Directors
Transaction Year Claim Costs - Major Categories		SMC,Managers,Directors
Transaction Year Claim Costs - Monthly Update		SMC,Managers,Directors
▼ 8		
Economic Loss Payments Reports		SMC,Managers,Directors
Health Care Subcategory Reports		SMC,Managers,Directors
IE and Premium Supplement		SMC,Managers,Directors
Monthly Statistical Information Package		SMC,Managers,Directors

Moving Beyond: Intelligent, Predictive Analytics

- **Employer Insurable Earnings Forecasting**
 - *External independent/explanatory variables (Stats Can) > OLS regression*
 - *Sector forecasts at each 9 WCB-AB economic sector*
- **Early Detection of High-Risk Claims**
 - *Linear & logistic regression, survival techniques (Kaplan, Cox) > high-risk claim assessment (age, gender, occupation, sector, earnings level, time on short-term disability before LTD or not)*
- **Asset-Liability Management (ALM)**
 - *Monte Carlo Methods*
- **Time-Series modeling of claim volumes (lost-time)**
 - *Econometric modeling of claim volumes*
- **Scenario & Sensitivity Analysis**
 - *Forecast risk > potential impacts on funded position, premium rate, etc.*
 - *Economic volatility (base case, best case, worst case)*
- **External affiliations - knowledge building (U of A, U of C)**
 - *School of Public Health, Rehab Medicine, Department of Econ*
 - *Clinical outcomes research, macro-economic research*

Moving Beyond: Intelligent, Predictive Analytics



QUESTIONS

