Geo-business for large organizations

1 INTRODUCTION

✔ Borealis – who we are

- Based in Canada, founded in 2004
- 39 employees, multi-language team
- GIS specialists, engineers, developers

1 INTRODUCTION

- ✓ Our expertise

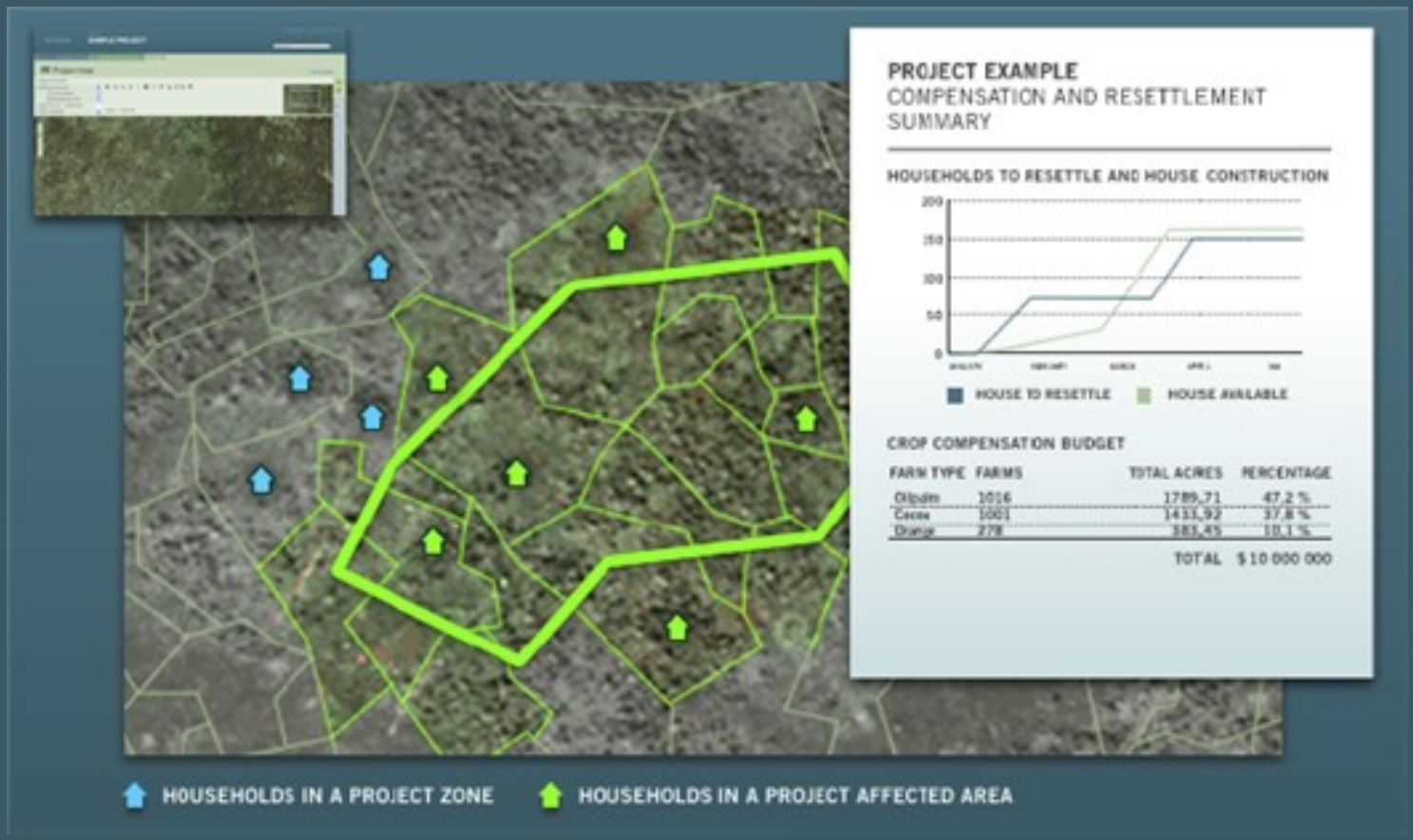
- ✓ Main markets: mining and oil

1 INTRODUCTION

- Our strengths
  - Knowledge of business sector
  - Geospatial tools integration
  - Solutions based on open source technologies

1 INTRODUCTION

✓ Example



borealis

1 INTRODUCTION

- ✓ Open source components used
  - Geoprisma
  - Openlayers
  - Mapfish
  - Mapserver
  - PostgreSQL / PostGIS
  - Jasper Reports
  - Talend
  - Proj.4

2 CASE STUDY – PROGRESS REPORT

✓ Context

- Large mining entreprise : 18 B USD of revenues
- More than 40 mineral exploration sites in over 20 countries
- Big quantities of information, no standard way of reporting

2 CASE STUDY – PROGRESS REPORT

- ✓ Mandate

  Implement an information system to generate automatically a Monthly Exploration Progress Report from worldwide operation sites

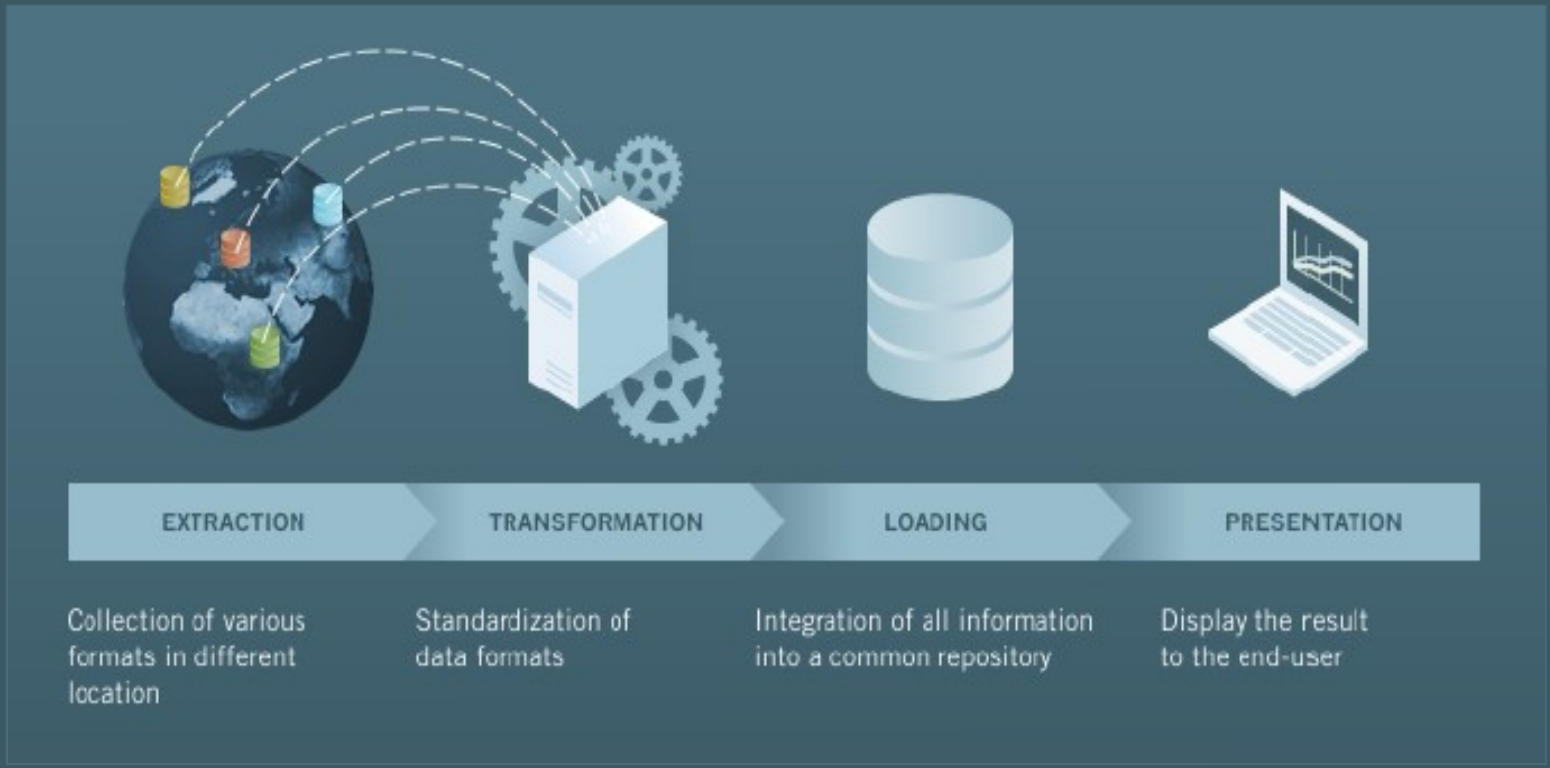
2 CASE STUDY – PROGRESS REPORT

- Web-based reporting application : on-site data entry

borealis

2 CASE STUDY – PROGRESS REPORT

- ✓ Multi-site data integration (multi-projection)



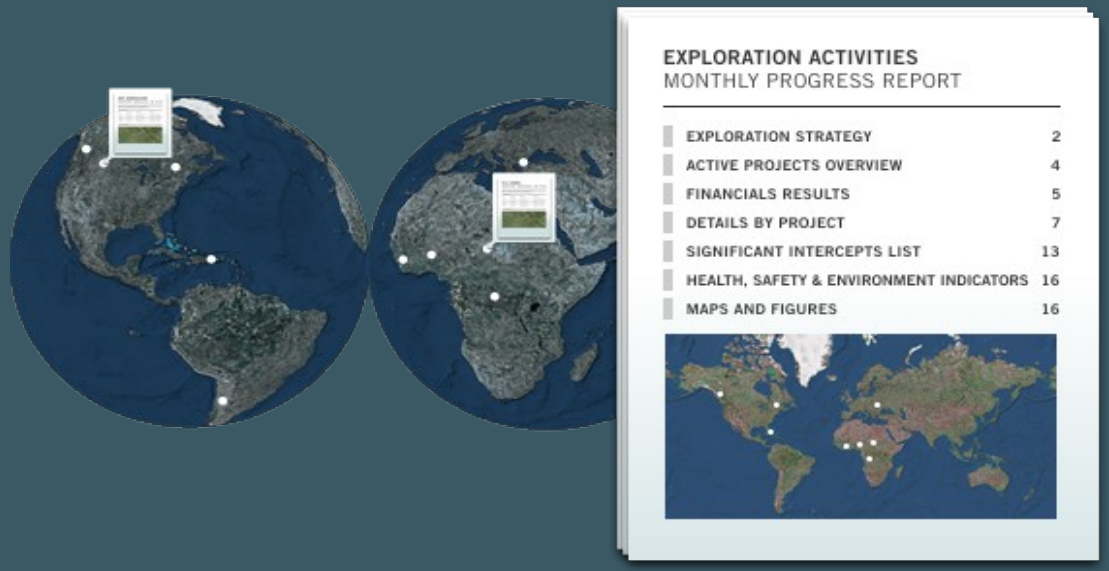
2 CASE STUDY – PROGRESS REPORT

✓ Data approval mechanism

- Responsibility taken by all parties
- Process auditability

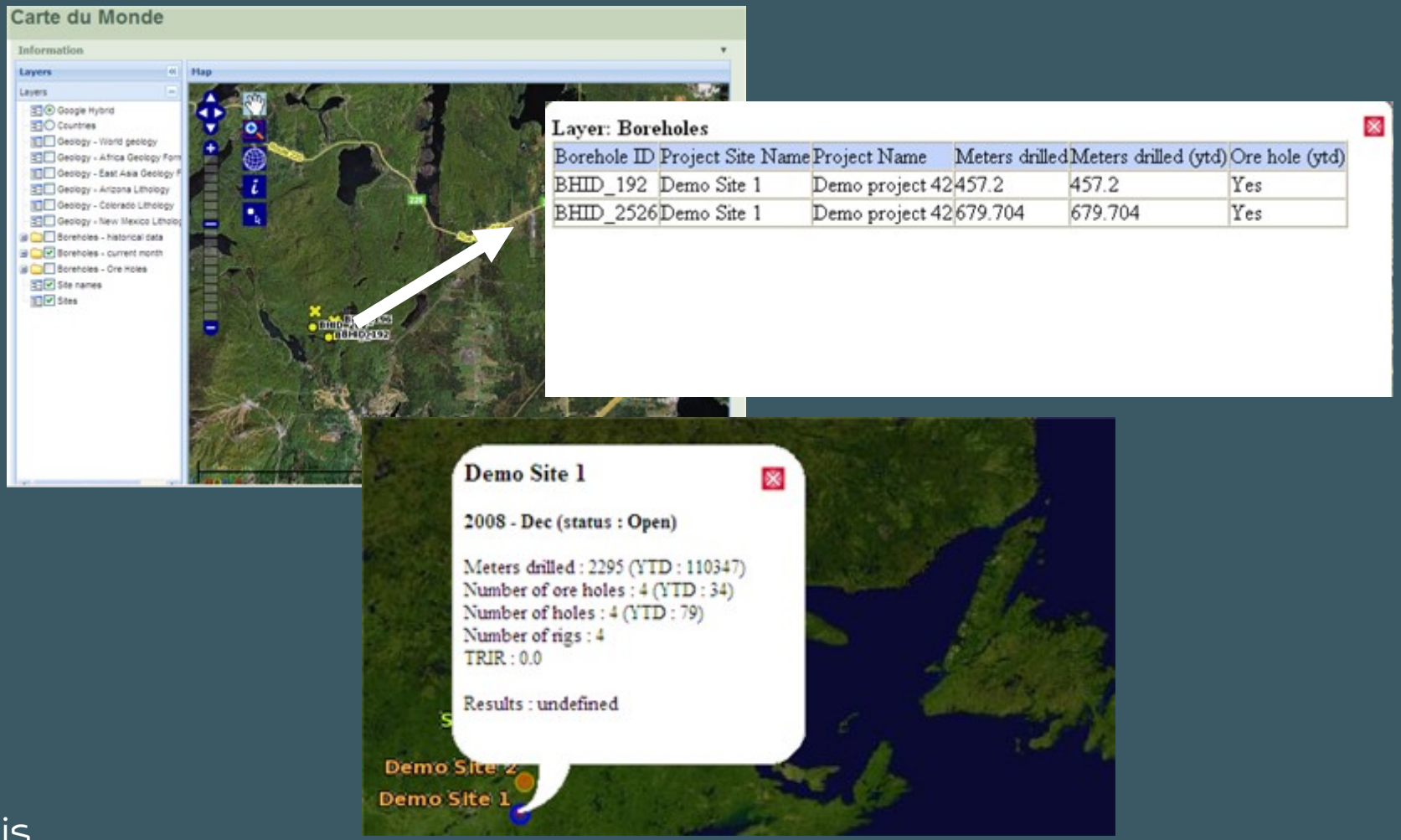
3 ACHIEVEMENT

- ✔ Monthly Progress Report : Huge success !!
- ✔ Sent monthly to the CEO and board of the company



3 ACHIEVEMENT

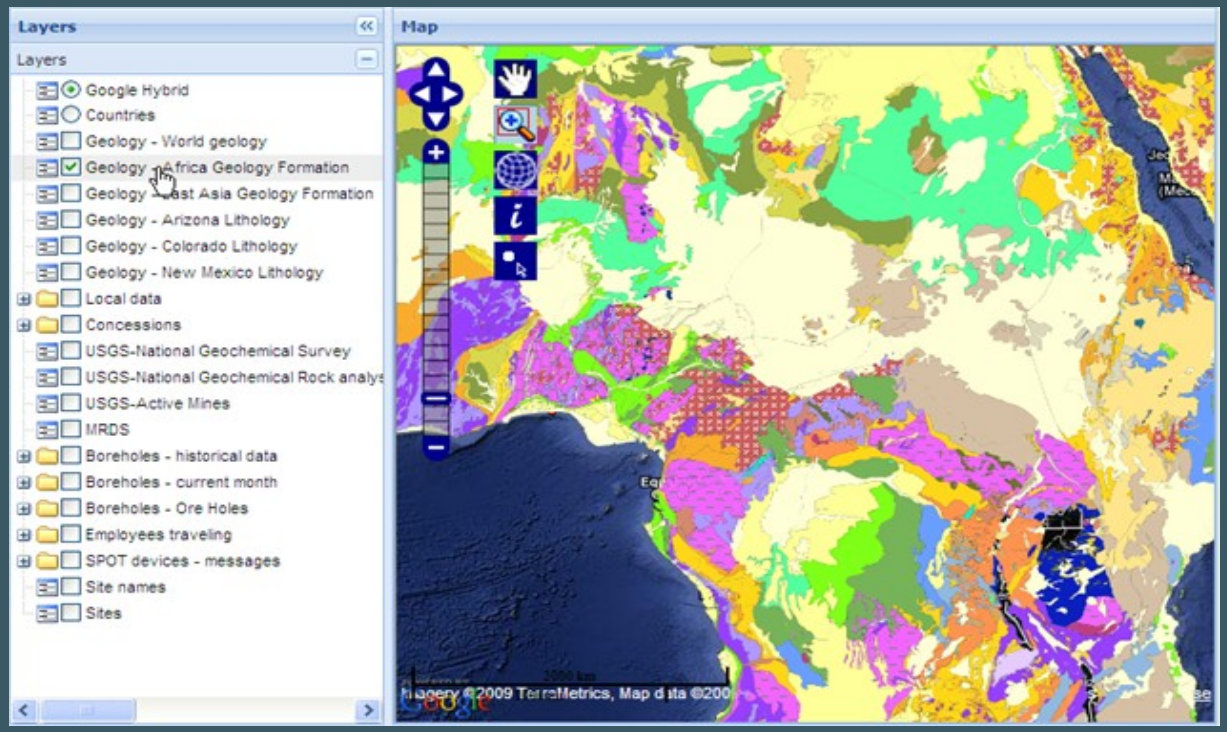
- ✔ Interactive world map



borealis

3 ACHIEVEMENT

- Data in context with external sources
  - One Geology (web services), Google layer, USGS geochemical database



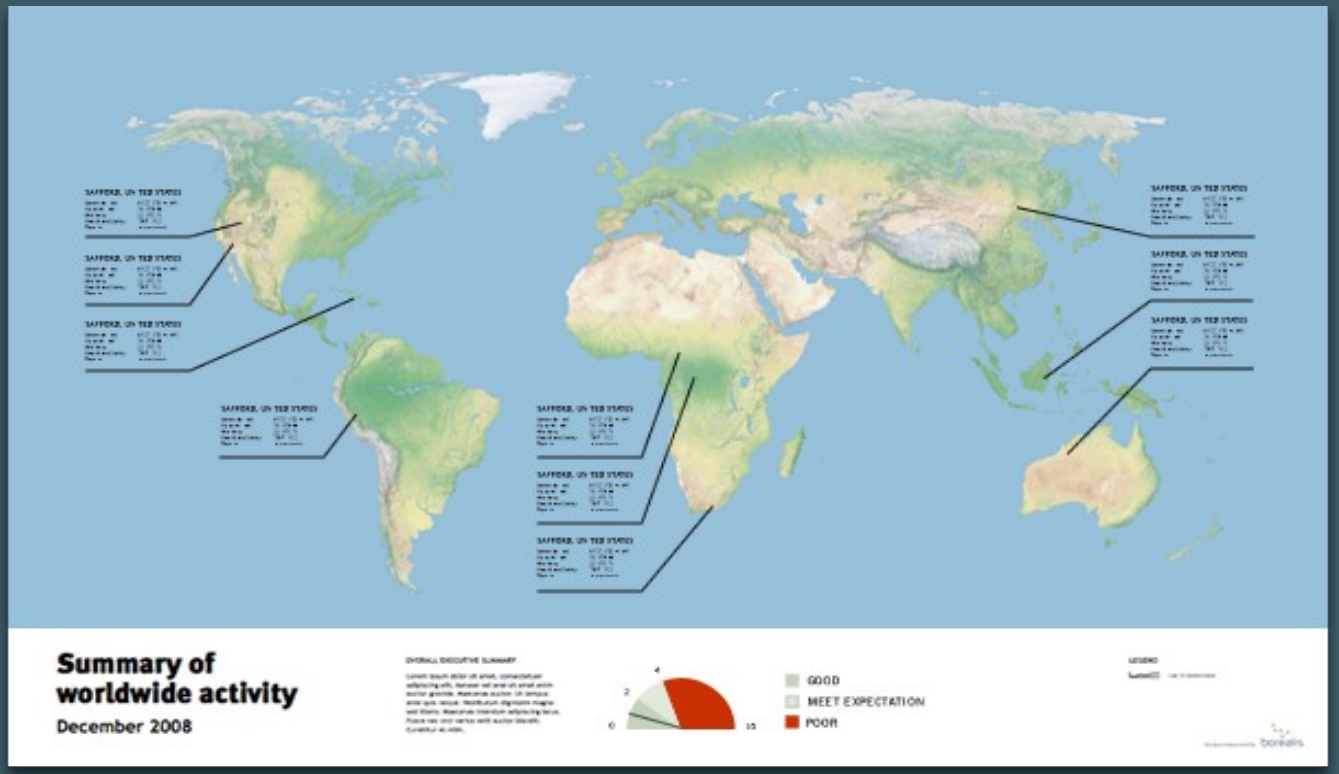
3 ACHIEVEMENT

- ✓ Customizable at will
  - Personnel GPS devices : security and tracking

borealis

3 ACHIEVEMENT

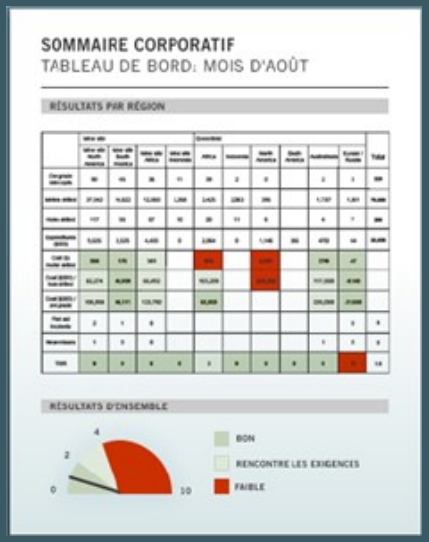
- ✓ World map poster
  - Worldwide dynamic monthly status
  - Printable map

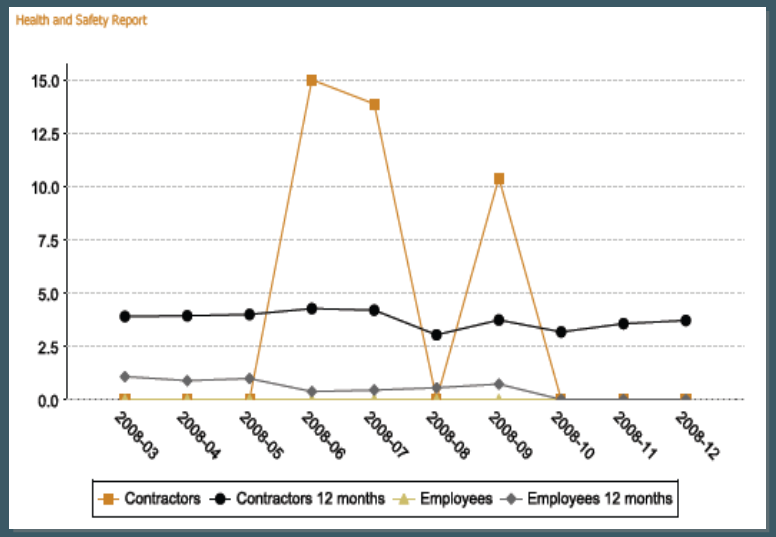


borealis

3 ACHIEVEMENT

- Key performance indicators (KPI)
  - Several data axes, « on-the-fly » health & safety statistics calculation
  - Outputs are dashboards, reports and graphs



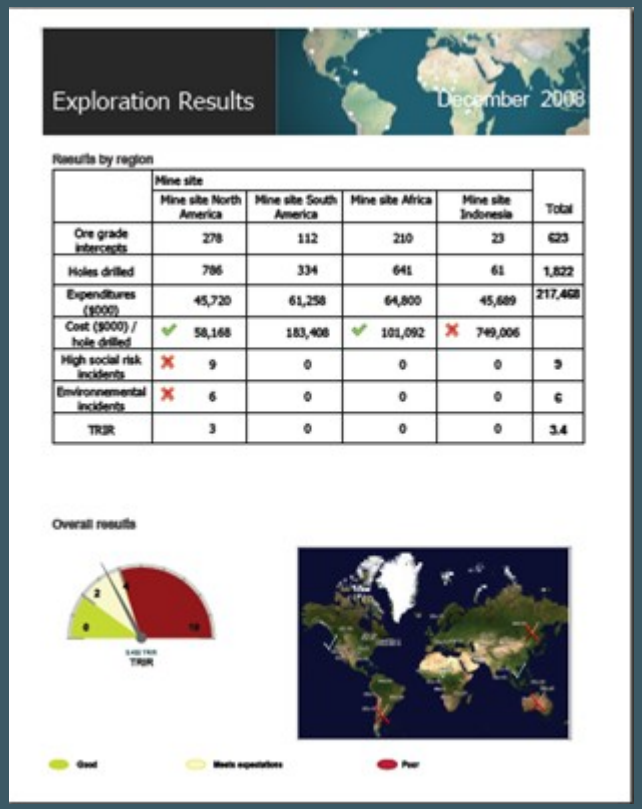


borealis

3 ACHIEVEMENT

✓ General dashboard

- One page summary displaying monthly results



Exploration Results

December 2008

Results by region

	Mine site				Total
	Mine site North America	Mine site South America	Mine site Africa	Mine site Indonesia	
Ore grade intercepts	278	112	210	23	623
Holes drilled	786	334	641	61	1,822
Expenditures ($000)	45,720	61,258	64,800	45,689	217,468
Cost ($000) / hole drilled	✓ 58,168	183,408	✓ 101,092	✗ 749,006	
High social risk incidents	✗ 9	0	0	0	9
Environmental incidents	✗ 6	0	0	0	6
TRIR	3	0	0	0	3.4

Overall results

TRIR

Good

Poor

- Exploration
- Finances
- Health & Safety
- Environment

borealis

4 BENEFITS

- ✓ Several person-hours saved yearly
- ✓ Data traceability and process auditability
- ✓ Standard data reporting mechanism
- ✓ Centralized information access
- ✓ Quick custom reports integration

4 CHALLENGES

- Technical
  - Multiple coordinate systems, and missing ones
  - Remote implementation
  - Low bandwidth
  - Internal infrastructure
- Organizational
  - Resistance to change
  - Coordination with IT team
  - Multi-country / multi-cultural environment

5 CONCLUSION

Success factors

- Emphasis on business process instead of technology (added-value)
- Minimal technological constraints: Open source
- Iterative and AGILE approach aimed at quick results
- Commitment from high-level management
- Return to users : satisfy the needs

5 CONCLUSION

- Using open source technologies in large organizations
  - It is possible !

INTEGRATING TECHNOLOGIES AT A HUMAN SCALE

www.boreal-is.com