



Swiss-Swedish Innovation Initiative

Winterthur, Feb. 21nd 2013



About APM Technologies S.A.

- Private Company founded in 2002
- Based in Geneva, Switzerland
- 10 Collaborators in Geneva, 4 in U.K.
- Serving 14 airlines worldwide
- Integrated airline management software



Some of our challenges

- Electronic Flight Bag (EFB)
- Database management tool (Monalisa)
- Optimisation: mass computing for large-scale problems



Electronic Flight Bag (EFB)

- Electronic Flight Bag (EFB)
 - Prepare crew flight data before take-off on electronic platform
 - Allow crews to fill reports **OFF-LINE**
 - Ingest crew reports once online again





Electronic Flight Bag (EFB)

- Electronic Flight Bag (EFB)
 - Prepare crew flight data before take-off on electronic platform
 - Allow crews to fill reports ***OFF-LINE***
 - Ingest crew reports once online again
- What we need



Electronic Flight Bag (EFB)

- Electronic Flight Bag (EFB)
 - Prepare crew flight data before take-off on electronic platform
 - Allow crews to fill reports **OFF-LINE**
 - Ingest crew reports once online again
- What we need
 - Guarantee data security (e.g. stolen support)



Electronic Flight Bag (EFB)

- Electronic Flight Bag (EFB)
 - Prepare crew flight data before take-off on electronic platform
 - Allow crews to fill reports **OFF-LINE**
 - Ingest crew reports once online again
- What we need
 - Guarantee data security (e.g. stolen support)
 - Cross-platform solutions to suit multiple airlines

DB management (Monalisa)

- In-house DB management tool
 - Meta-model of DB structure for Firebird/Interbase and Oracle
 - Graphical User Interface (GUI) for DB model management
 - Easy and safe DB upgrades
 - Weekly DB-upgrade for customers working with Agile method





DB management (Monalisa)

- In-house DB management tool
 - Meta-model of DB structure for Firebird/Interbase and Oracle
 - Graphical User Interface (GUI) for DB model management
 - Easy and safe DB upgrades
 - Weekly DB-upgrade for customers working with Agile method
- What we need



DB management (Monalisa)

- In-house DB management tool
 - Meta-model of DB structure for Firebird/Interbase and Oracle
 - Graphical User Interface (GUI) for DB model management
 - Easy and safe DB upgrades
 - Weekly DB-upgrade for customers working with Agile method
- What we need
 - Answering questions such as



DB management (Monalisa)

- In-house DB management tool
 - Meta-model of DB structure for Firebird/Interbase and Oracle
 - Graphical User Interface (GUI) for DB model management
 - Easy and safe DB upgrades
 - Weekly DB-upgrade for customers working with Agile method
- What we need
 - Answering questions such as
 - Is it innovative at all?



DB management (Monalisa)

- In-house DB management tool
 - Meta-model of DB structure for Firebird/Interbase and Oracle
 - Graphical User Interface (GUI) for DB model management
 - Easy and safe DB upgrades
 - Weekly DB-upgrade for customers working with Agile method
- What we need
 - Answering questions such as
 - Is it innovative at all?
 - How does it fit Agile Software Development's process?



DB management (Monalisa)

- In-house DB management tool
 - Meta-model of DB structure for Firebird/Interbase and Oracle
 - Graphical User Interface (GUI) for DB model management
 - Easy and safe DB upgrades
 - Weekly DB-upgrade for customers working with Agile method
- What we need
 - Answering questions such as
 - Is it innovative at all?
 - How does it fit Agile Software Development's process?
 - Can it improve the Agile Software Development process?



DB management (Monalisa)

- In-house DB management tool
 - Meta-model of DB structure for Firebird/Interbase and Oracle
 - Graphical User Interface (GUI) for DB model management
 - Easy and safe DB upgrades
 - Weekly DB-upgrade for customers working with Agile method
- What we need
 - Answering questions such as
 - Is it innovative at all?
 - How does it fit Agile Software Development's process?
 - Can it improve the Agile Software Development process?
 - MS-SQL expansions



Optimisers

- Need to solve large-scale Linear Programming problems
 - $O(10^6)$ variables, thousands of constraints
 - GPU-based computing projects (with HEPIA Geneva)



Optimisers

- Need to solve large-scale Linear Programming problems
 - $O(10^6)$ variables, thousands of constraints
 - GPU-based computing projects (with HEPIA Geneva)
- What we need



Optimisers

- Need to solve large-scale Linear Programming problems
 - $O(10^6)$ variables, thousands of constraints
 - GPU-based computing projects (with HEPIA Geneva)
- What we need
 - High-performance parallel computing (ideally GPU-based)



Optimisers

- Need to solve large-scale Linear Programming problems
 - $O(10^6)$ variables, thousands of constraints
 - GPU-based computing projects (with HEPIA Geneva)
- What we need
 - High-performance parallel computing (ideally GPU-based)
 - Efficient /customisable algorithm for rules testing (ideally parallel)



Thank you for your attention!

Any questions?