Software-Renovation with Xtext
Eclipse Finance Day – Oct 2014

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The Story

• 1993 – In the beginning.
• 1996 – It’s alive.
• 2011 – Legacy system?
Legacy?

- Uses outdated or poorly supported technologies
- Developed with outdated or poorly supported technologies
- Poorly understood
- Do not align with the business strategy
- But ... are still providing business value

“Over time any successful system will become a legacy system” - if it is not modernized
Challenges

First some numbers.
• 4.5 million accounts
• 1000 transactions per second
• 900 million transactions a year
• Over 2 millions lines of code.
• Not small
Challenges

1. Knowledge ‘bleed’
   • Better documentation.

2. Handover
   • Better documentation!

3. Reduced developer capacity
   • More automation
   • More generated code
   • Better IDE support.
Challenges

That is ... the same as for every project!

... but more acute.
Solution

Modernize the Development Tool chain.
Solution

eclipse

Xtext

emf
Solution
Solution

- Business Types RSA
- Business Classes
- Persistence Layer
- Logical Databases
- Merge
- Constants
- Message
- Web Services
- Primitive Types
- Business Errors
- Queries
- Booking
- Transact Mapping
How did it go?

• We did it.
• No ‘show stoppers’
• It’s hard to stop.
How did it go?

Proprietary Tools

Eclipse IDE

Text Editors

Binaries / Scripts
How did it go?

• Some more numbers
  • 20 meta models / DSL
  • Circa 300 models
  • Circa 1 000 000 lines of code generated, 50% of the codebase.
  • Code generated increased 25 – 30 % (estimated)
How did it go?

• Did we achieve our goals?
  1. Better system documentation.
     • Models are self documenting.
     • Still missing business information.
  2. Development is more efficient.
     • We think!
Conclusion

• Using Eclipse/Xtext is good.
• Using models is good.
Questions?

Thank you!

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