

# Get Your Project Back In Shape!

*How  
A Few Techniques  
Can Change  
Your (Project's) Life*

objektfabrik  
Joachim Tüchel  
objektfabrik



# About me

- Founder and director of objekt*fabrik*
- Business Informatics (Banking)
- Smalltalk since 1996  
(VA Smalltalk, VisualWorks, Squeak/Pharo)
- jtuchel@objektfabrik.de,  
joachimtuchel.wordpress.com

# Some projects

- Fat Client and Web Applications in Smalltalk and Java
- Project Planning and Controlling
- Customer Relationship Management
- Loan & Collateral Management
- Accounting for Small Businesses (Seaside)
- Migration of VA ST Projects to V6 & 7 & 8

# About objektfabrik

- Founded 1999 in Ludwigsburg, Germany
- Training, Consulting, Professional Services
- Application and System architecture
- Software Development in Smalltalk, Java, Ruby, Scala and Objective-C
- Instantiations Business Partner since 2006
- IBM Business Partner before that

# Training Offerings

- Object Technology Basics
- Smalltalk Basics
- VA Smalltalk Application Development
- Advanced VA Smalltalk workshops  
(Packaging, Config Management, SUnit...)
- Web Application Development with Seaside



# A Typical Smalltalk Project 2010

objekt*fabrik*

Joachim Tüchel  
joachim.tuechel@objektfabrik.de



Started in the  
early to mid 90's





Smalltalk and OO were „new“,  
cutting edge technologies





A photograph of a wooden staircase leading up a hill, surrounded by dense green foliage and vines. The text is overlaid on the image in a yellow, sans-serif font.

Declared as legacy  
by management

Soon to be replaced

Innovation happened  
in new projects



# Still in Daily Use

Stable

Reliable

Supports Business





Happy users





# The Replacement Project



a few years later



New features -  
No budget





A large, messy stack of papers and documents, representing a backlog. The papers are of various colors (white, yellow, blue, green) and are piled haphazardly, with many edges visible, creating a sense of overwhelming volume and disorganization.

# The Feature Backlog

**After 5 years  
of being legacy**





# *The Code Quality*



# What to do?



# Use the Best Tools You Can!



objekt*fabrik*  
Joachim Tüchel  
objektfabrik



# Smalltalk has Great Tools!

- Refactoring Browser
  - Read into existing code by improving it's readability
- sUnit and sUnit Browser
  - Understand existing code and prove it
  - Make sure defects don't show up again

# Refactoring and Unit Tests

- Are two sides of the same coin
- Both are powerful
- But as a team they are a secret weapon!

# More Tools

- SmallLint
  - ships with Refactoring Browser
  - Learn about code quality and improve it
- Enhanced Debugger / StsDebugger
- VA Assist Pro
  - Many „small“ enhancements, esp. in configuration Management



# Get Everything under Version Control!



objekt*fabrik*  
Joachim Tüchel  
objektfabrik

# Everything?

- Smalltalk code
- External files
  - Images, DLLs,
  - Configuration: INI-Files etc.
  - „Integration files“
    - jar files
    - XML shared with other projects
- Documentation ...

# Why?

- Keep stuff in sync with application version
- Keep track of deliverables
  - Within your project
  - Between projects
- Defined gates for artefacts between
  - Individual developers
  - Projects
- Oh wait! Seems you're missing my latest changes to the application .ini!

# Demo

Real World Example:  
Getting rid of troubles with the application .INI



# Slaughter your Holy Images!



objekt*fabrik*  
Joachim Tüchel  
Joachim Tüchel

# Problems with „Holy Images“

- It ran in my Image yesterday!
- Oh, you just have to execute a few statements that I've got in a Workspace somewhere...
- Markus is not here today, I have no idea how to initialize the database mappings
- We want to migrate to the latest VAST Version, but we can't setup an image and load our code into it



# One Click Loading

- Bootstrapping from an empty image
- Turn workspaces into classes
- Clean up load order problems
  - Cyclic dependencies
  - Duplicate application / map dependencies
  - No manual unload in step 14!
- Class methods loaded / removing

# Don't keep images

- Throw away your image frequently (daily)
- You'll see if bootstrapping still works
- If it doesn't - chances are packaging won't work either!
- To prevent load times: provide a bootstrapped image every morning
- More To Come!



# Adopt A Stream Concept



objekt*fabrik*  
Joachim Tüchel  
objektfabrik

# Streams to enable Parallelism

- You typically work on at least two versions at a time
- V2.4 currently in production – maintenance
- V2.5 beta-test at a few customers - maintenance
- V2.6 next release – under development
- V3.0 next major release – prototyping



# Parallelism?

- Fixes to one version potentially relevant for other versions
  - Individual changes for every version
  - Individual unit tests for every version
  - Individual code dependencies, packaging requirements, external dependencies etc.
- Separate development teams for different product versions

# Streams: Goals

- Isolate product versions from each other
- But Allow „cross-release“ of Code changes
- Keep code close together
- All code in one Library
- Provides context for their current work
  - „I am currently working on 2.5“
- „Changes Inbox“



# How?

- Dedicated Image per Stream
  - Commandline parameter or abt.ini
- Developers accept using stream concepts
- Clean and easy loading of code
  - One-Click-Loading
- Based on Configuration Maps
  - Required maps
  - Top-Level Map as Inbox and entry point for loading

# Tools for Streams

- Differences Browsers
  - What has changed in my Image compared to the Stream
  - Releasing into the stream or
  - Discard changes (load back stream version)
- Load a Stream
  - Current edition
  - Selected version



# Demo

Real World Example of A Stream Environment

# Automate As Much As Possible!



objekt*fabrik*  
Joachim Tüchel  
objektfabrik



# What can be automated?

- Loading a Stream
- Packaging an Application
- Preloading a developer image
- Unit Tests
- Code Quality Checks
- Deployment of an Application
- Copy stuff to/from directories / servers
- Prepare complete application folder
- Lots more...

# Demo

Automatic Packaging and Deployment

# Continuous Integration

These tools are the building Blocks for a CI  
environment

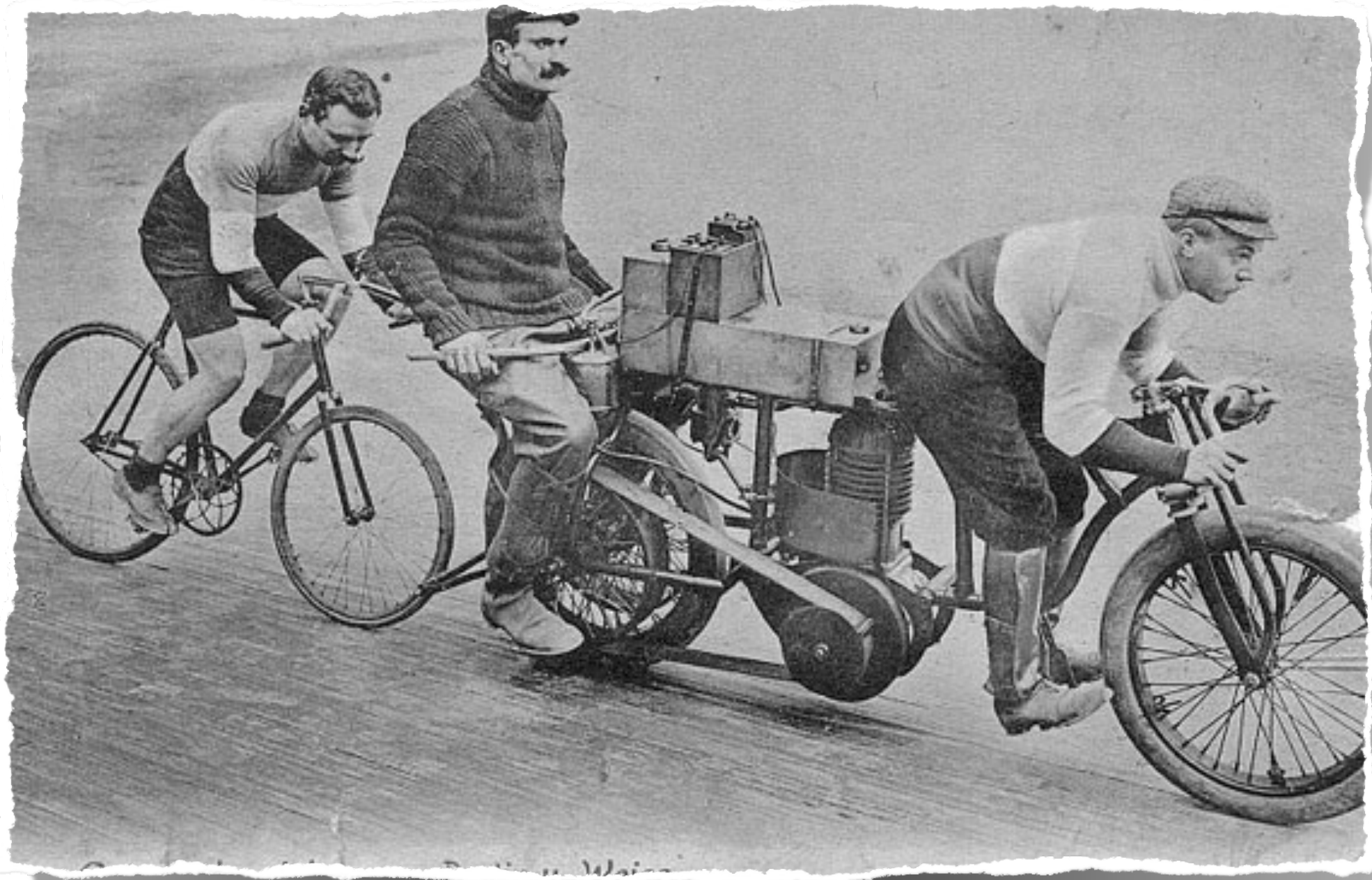


# Some Tips



objekt*fabrik*  
Joachim Tüchel  
Joachim Tüchel

# Find your own pace!





# Just Do It

Many projects don't start  
because they fear they'll never reach the end.





They simply Won't  
anyways!

Because there's  
always more that you  
can do!



# Keep everybody on board

It won't work if some team members  
don't follow the same rules and principles



# Get Help

Most Problems have been solved before



# VA Smalltalk advanced Programming Techniques

- 5 days intensive training and practice
  - Monday: Programming an example application, Testing with sUnit
  - Tuesday: Refactoring and sUnit, Test Driven Development
  - Wednesday: Configuration Management with Envy, Stream concepts
  - Thursday: Packaging a VA Smalltalk Application
  - Friday: Questions and Answers, Wrapping Up

# Questions?



**objektfabrik**  
Joachim Tuchel  
Joachim Tuchel  
Fliederweg 1  
71640 Ludwigsburg, Germany  
jtuchel@objektfabrik.de  
www.objektfabrik.de