

APEX in Big Projects with Many Developers

ODTUG 2011



About Dimitri Gielis

- Director & Co-Founder of APEX Evangelists
- 12+ years of Oracle Experience
- OBUG APEX SIG Leader
- ‘Dimitri.Gielis@AE’ in the APEX forums
- Presenter at ODTUG, OOW, UKOUG, OBUG, ...
- OCP 8i/9i/10g + APEX Certified
- Oracle ACE Director
- “APEX Developer of the Year 2009”
- Blog @ <http://dgielis.blogspot.com>



Dimitri Gielis 🏆

Oracle ACE Director



Oracle Application Express (APEX) Specialists

We are passionate about (and only focus on) Oracle Application Express (APEX) solutions, consulting and training.

Let our passion work for you!

— APEX Evangelists

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News

APEX Evangelists website revamped! Check out our solutions, consulting and training offering.

[Sign Up Now](#)

Sign up for an APEX Evangelists account to view our solutions live and receive our two monthly newsletter via email to your inbox.

Upcoming Events (and meet AE)



29-MAR-2011 OBUG Connect
Tracking GPS locations in APEX



18-MAY-2011 AE Training
2-day APEX with John and Dimitri



27-JUN-2011 ODTUG Kaleidoscope
APEX 4.0 Charts Inside Out



28-JUN-2011 ODTUG Kaleidoscope
APEX Big Projects Many Dev.



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APEX BLOGS

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Tweets



sametbasaran (Samet Basaran) RT @ApexNinjas: Came across this:Formspider is better than APEX
<http://theformspider.com/product.php?descid=FormspiderVSOacleApex>
Anyone used it? #orclapex 20-MAR



hans_de_vries (Hans de Vries) RT @whitehorsesnl: RT @mvzoest: Cool! Our book is mentioned in the latest issue of #Oracle Magazine #orclapex <= congrats! 20-MAR



deltalounge (PeterPaul) RT @mvzoest: Cool! Our book is mentioned in the latest issue of #Oracle Magazine #orclapex <= congrats! 20-MAR

[View more >](#)

Plugins

Location Map Image	17-MAR
Item Button with redirect	08-MAR
Multiple File Upload	03-MAR
SkillBuilders Calendar	28-FEB
SkillBuilders Geocode	28-FEB
SkillBuilders Save Value	28-FEB
SkillBuilders Password	28-FEB
OPpen Layers region	28-FEB
Text	20-FEB

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Blogs

Plugin: Location Map Image

Posted on 18-MAR-2011 07:00 by Peter Raganitsch

A couple of weeks i introduced a [Plugin](#) which helps the user to enter a postal address in an APEX Form.

Now i present a Plugin which lets you display an already stored address or location coordinates in a very simple and fast loading [Google Map Image](#) (png).

If you want you can put a link on this image which opens the address on maps.google.com in a separate Window where your user can interact with the Map.

These are the settings. Easy as can be :-)

Settings

Width

In the Picture



Request to list me too

Links

APEX Examples

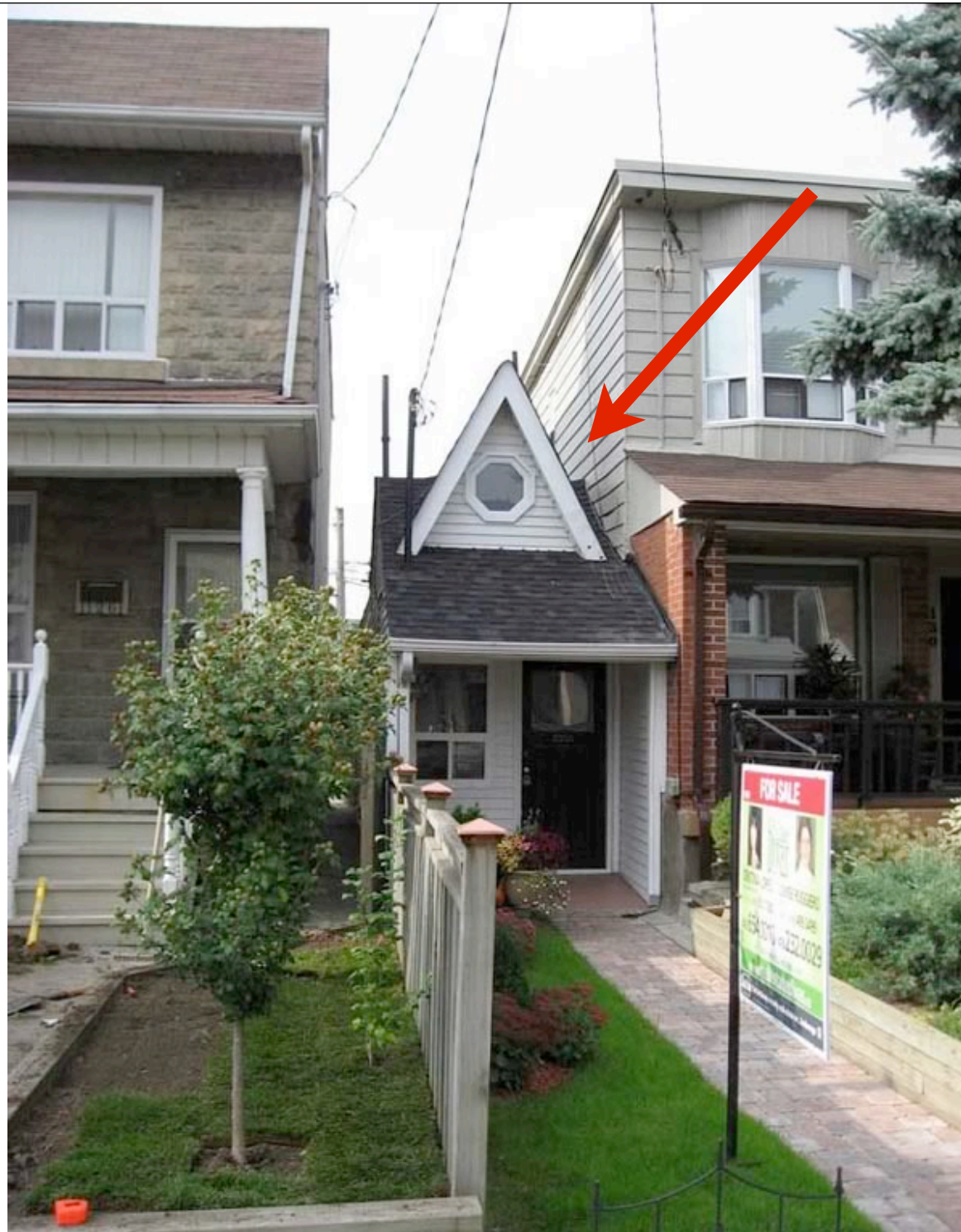
[Carl Backstrom](#)
[Denes Kubicek](#)
[Dimitri Giellis](#)
[Hillary Farrell](#)

Why I build this presentation



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Presentation outline



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Presentation Outline

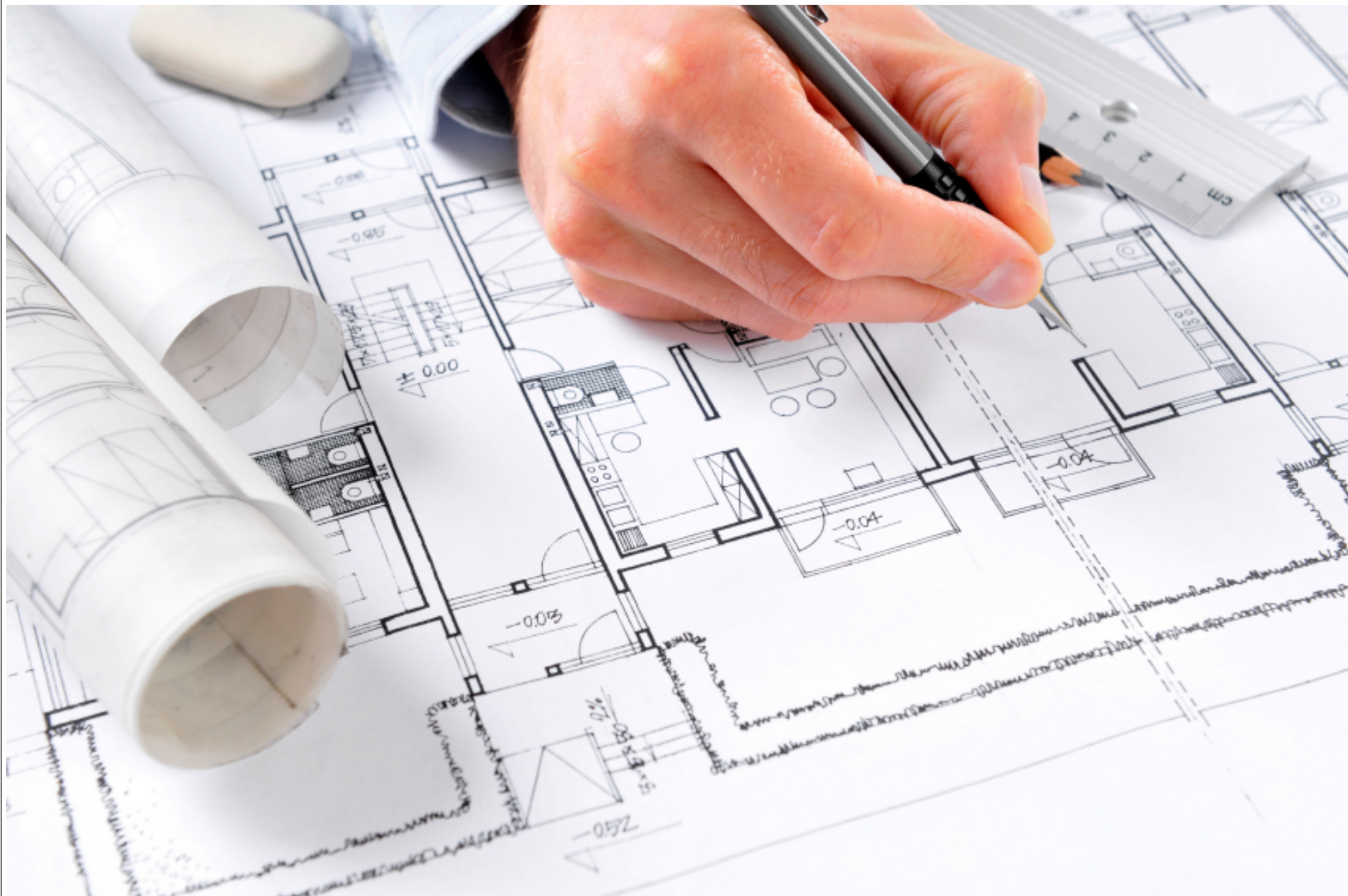
- Infrastructure Setup
- Project Management Setup
- Developer's Workplace
- Developer's Practices
- Deployment strategy



Infrastructure Setup



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Think About

- Environments (DEV, TEST, ACC, PROD)
- Server hardware and Operating System
- Database and APEX configuration
- Webserver choice
- Backup Strategy
- Testing Strategy
- Version Control
- Project/Application specifics





Our Infrastructure

- Servers in the cloud (@ Amazon)
- Oracle Linux
- Oracle Database 11gR2
- Apache with mod/plsql (testing Glassfish / APEX Listener)
- APEX 4.0
- Subversion and Dropbox
- Different backup and testing strategies (DB, APEX app, External files)



Setup Of New Project

- One script to run (< 30 seconds)
 - Create Directory structure
 - Add to Subversion Repository
 - Create Oracle structure
 - User
 - Tablespace
 - APEX workspace
 - Create Backup scripts
 - Create Test scripts



Setup new Project

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Project Management Setup



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Project Management

- **Initiate a Project**

- Project definition outlines the goals, objectives, scope, deliverables, assumptions, constraints, risks, issues, key people, benefits, costs and duration

- **Controlling a Project**

- Project plan identifies the stages, tasks, timeline and resources
- Manage Risks and Issues
- Progress Report and Communication

- **Closing a Project**

- Acceptance Form and Project Closure Report
- Lessons Learnt

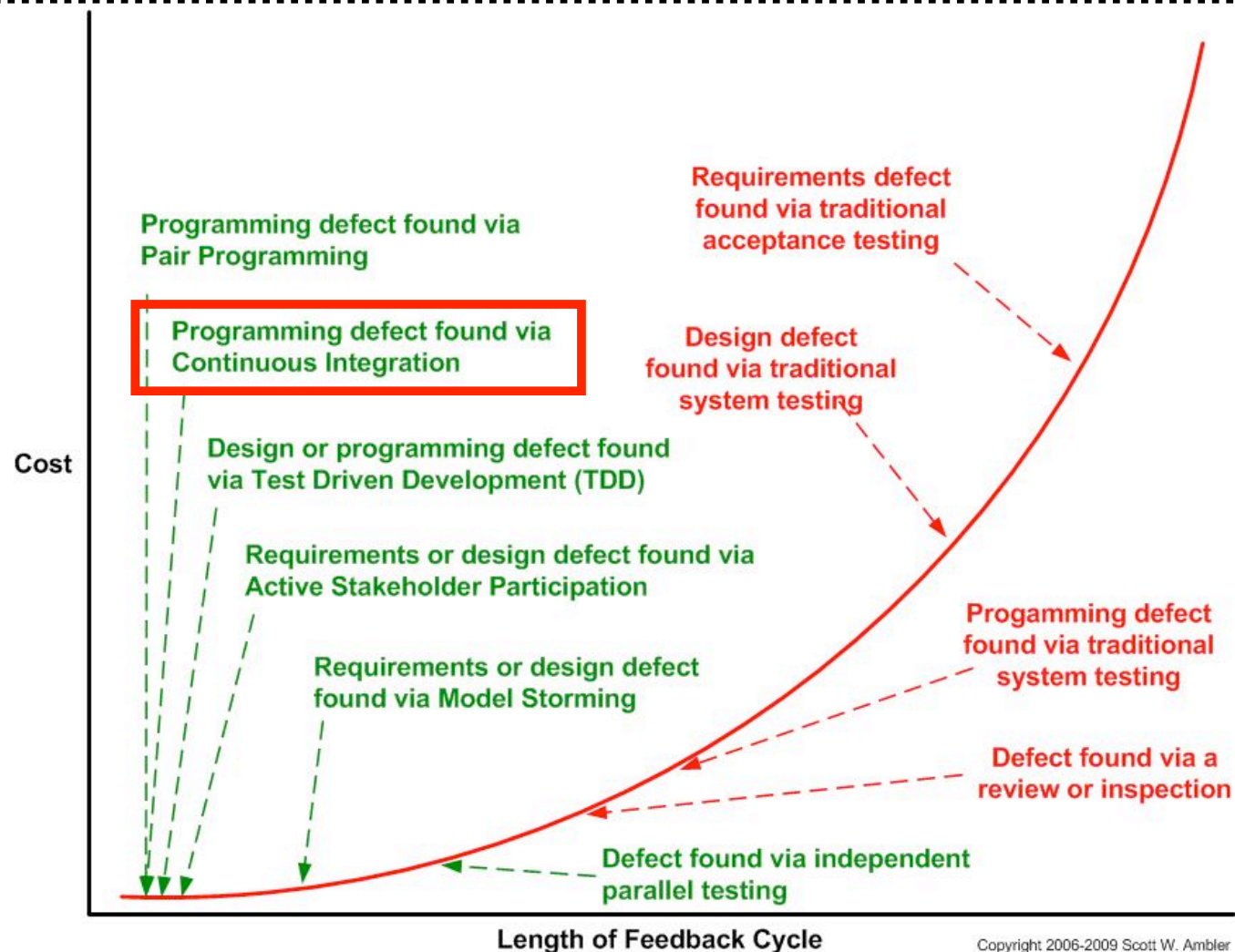


Development Methodology

- Make a choice
 - Waterfall
 - Agile
 - ...
- My experience learns that APEX works well with the Agile methodology (rapid changes, continuous integration, ...)



Continuous Integration



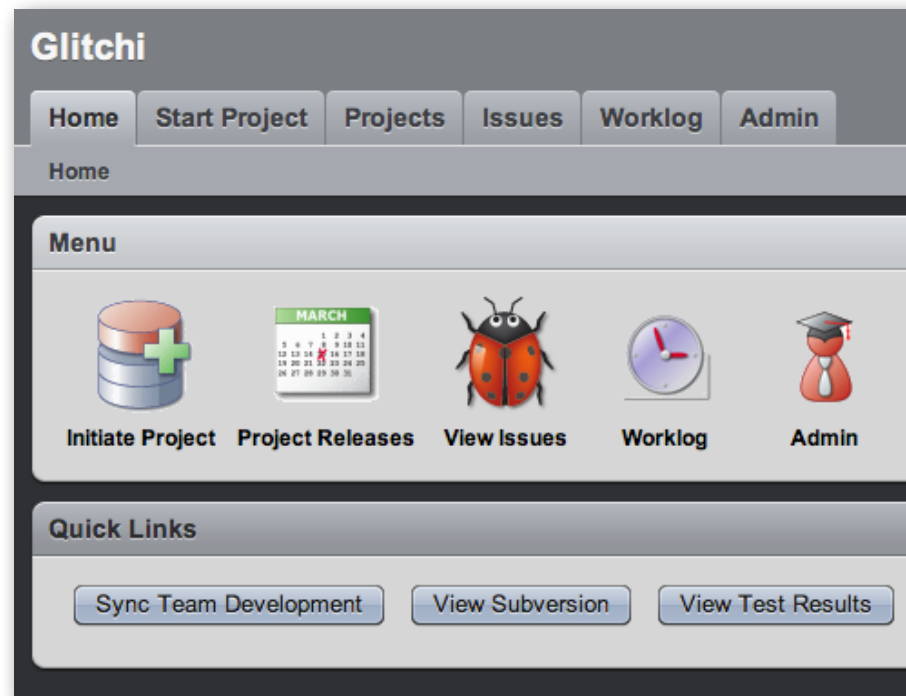
Source: <http://www.ambysoft.com/essays/whyAgileWorksFeedback.html>



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Creation Project Management

- Use of PM Tool to setup the project
 - Team Development (build-in APEX)
 - External Tool like Jira, FogBugz, ...
 - Own Tool (we use Glitchi)



Automated Testing

- Frequent runs of builds with Ant/Maven and Hudson
- UI Tests with Selenium
- Regular APEX Checks through the Advisor
 - Feature request to run the advisor with a job and get the results stored (APEX 4.1?)
- PL/SQL Unit Tests with SQL Developer, Quest Code Tester, ...



Result Project Management

- Project status at any time
- Dynamic and motivated development team
- Frequent feedback from/to customer



Project Management

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Developer's Workplace



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Development Tools

- Browser with plugins
e.g. Firefox with Firebug, YSlow, Selenium, ...
- Database tools
e.g. SQL Developer, PL/SQL Developer, TOAD, ...
- Subversion client
e.g. Versions, Tortoise SVN, ...
- Testing & Issue Tracking Tools
e.g. Jira, Fogbugz, Glitchi, ...
- Others
e.g. Dropbox, Cyberduck, Photoshop, Word, ...



Reusable Components

- PL/SQL Packages
e.g. Authentication, Logger, ...
- APEX Plugins
e.g. Accordion, Google Maps, ...
- Javascript & jQuery Plugins
e.g. jQuery UI, Tooltip, ...
- Others
e.g. Webservices, Packaged Applications, ...



Developer's Workplace

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Developer's Practices



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Naming Conventions

- Keep them simple!
- Better to have fewer and use them, than have a lot and nobody cares about it



Naming Conventions Example

- Database Objects
 - 3 letter prefix of Project Code
 - Constraints: _PK, _FK, _UK
 - Sequences: _SEQ
 - Triggers: _ITRG, _IUTRG, ...
 - Views: _VW
 - Materialized Views: _MV
 - Packages: _PKG



Naming Conventions Example

- PL/SQL Packages
 - All lower case
 - Comments and breaks between procedures and functions
 - Constants: c_
 - Global variables: g_
 - Local variables: l_
 - Exceptions: e_
 - Indentation: 2 spaces



Coding Practices

- All code in packages
- Instrument heavily
- Add comments where necessary
- Procedure in PKG shouldn't take more than one page
- Reusable code (if possible)
- Javascript? Look for Dynamic Action and/or Plugin
- Use of external files



APEX Features

- Make use of ALL the features
- With every new release more useful features are in



APEX Features Specific To This Topic

- Team Development
- Application and Page Groups
- Shared Components
- Publish and Subscribe to Master App
- Multiple Apps with same Authentication
- Application Properties
 - Substitutions - BASE_DIR
 - Version



APEX Features Specific To This Topic

- Lock Pages
- Comments on items
- Build Options
- Instance (Public) / Workspace Theme
- User Interface Defaults
- Plugins
- Shortcuts
- Advisor



Developer's Practices

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Deployment strategy



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What You Really Want!

- Deploy on a Friday
- Deploy without Testing
- Deploy directly in Production
- Don't take backups



!! Switch your mobile off when you do this !!



What You Really Want (serious)

- Easy, Consistent, Fast and Frequent deployments
- Always have backups to go to a previous version
- Be able to build an entire environment or just patch



Full Setup Of Environment

- Automated
 - Just one script to run, based on project setup
 - Ideal for Test servers
- Manual
 - Import APEX application (with Supporting Objects ?)
 - Export/Import datapump
 - Copy external files

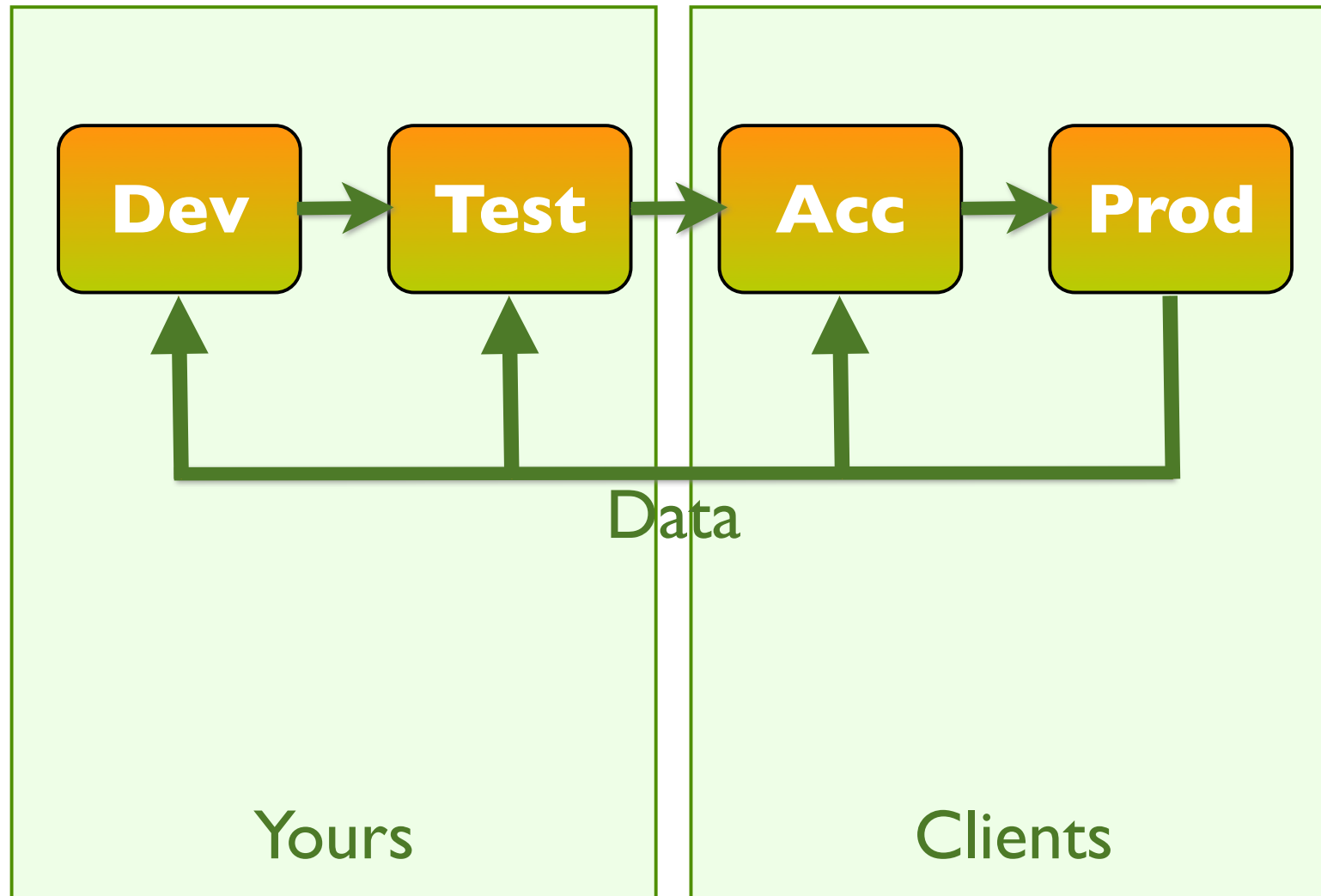


Patch Environment

- Depends level of Patch
 - APEX Page or Component?
 - Database Object?
- Need certain rules in place to be able to do it
 - APEX: Use same Workspace and Application ID (on different database)
 - DB: Use a schema compare tool to create the DDL (or keep manual scripts)



Release Cycle



Other Things To Think About

- Deploy with SQL Developer in Runtime only Environment (doesn't work with APEX 4.0 yet!)
- Use APEX Alias and/or Apache redirects
- Keep previous release but, make it unavailable (or redirect to the new one)



Deployment strategy

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Summary

- Infrastructure Setup
- Project Management Setup
- Developer's Workplace
- Developer's Practices
- Deployment strategy



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Q & A



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