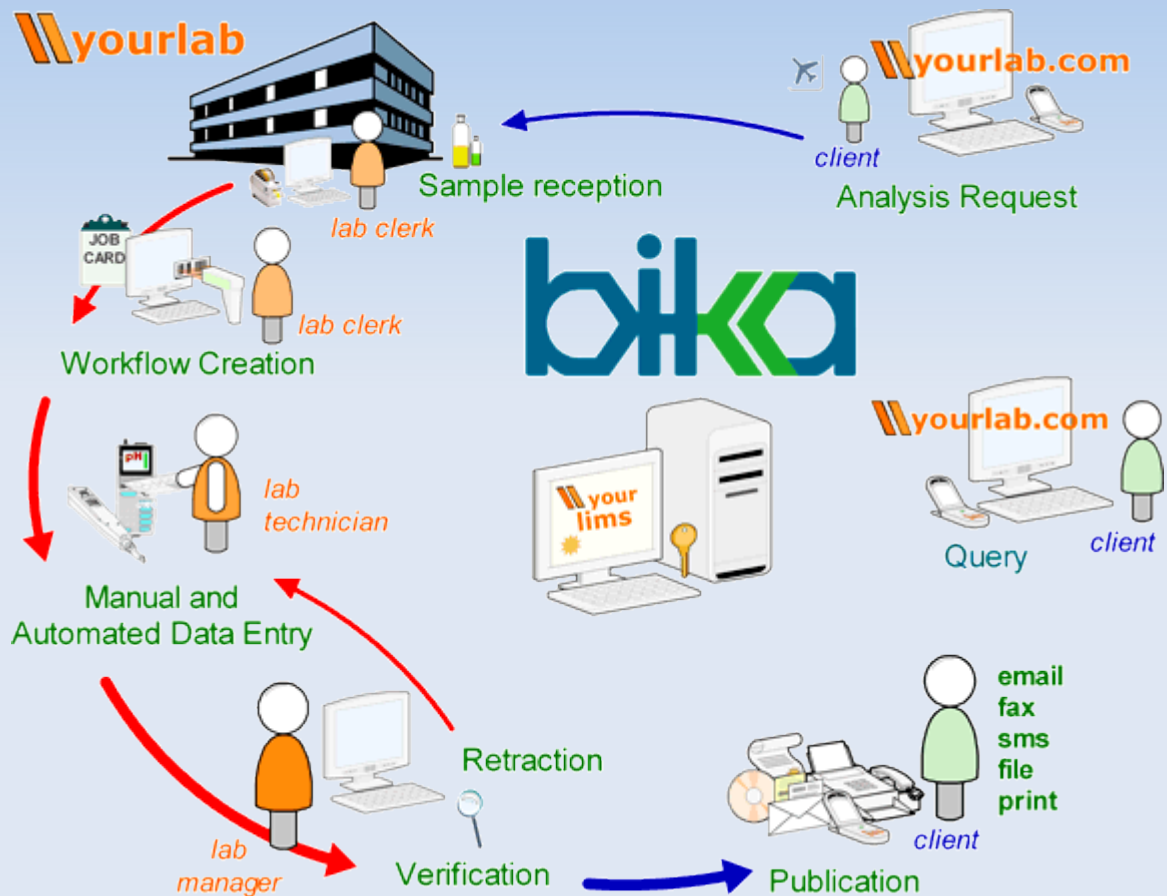


BIKA - developing Plone into a full featured LIMS



presented by
Roché Compaan

What is BIKA?

- What is a LIMS?
 - Laboratory Information Management System
- What is BIKA?
 - a Zulu word (pronounced bi:ka) meaning to report, from clan to clan, bring news of weddings, births, festivals and funerals
 - BIKA is an open source LIMS, developed by extending Plone. Lab personnel get the CMS for free.

Why Plone and not some other framework that has a cool OR mapping like TurboGears, Django or Ruby on Rails?

- We knew Zope, we love the ZODB. SQL sucks (but we can't avoid it)!
- We are application developers, not infrastructure developers. Plone has lots of infrastructure:
 - Fine grained per object security contributed by Zope
 - Portal actions
 - Portal membership
 - Session management
 - Workflow
 - Generated forms with Rich widgets from Archetypes Schemas
- Free, well-designed, accessible cross-platform user-interface that handles very complicated user interactions well.
- We get a LIMS with an integrated CMS. This is a big win! Not only for a LIMS, but many other apps too. Content and documents are central to many business processes so why not integrate a CMS?

The BIKA code

- It defines its own CustomisationPolicy that:
 - Changes the skin.
 - Defines roles applicable to Lab environment like Lab Manager, Lab Technician, Lab Clerk, Lab Client and defines appropriate permissions.
 - Installs custom lab workflow and tools

The BIKA code (cont.)

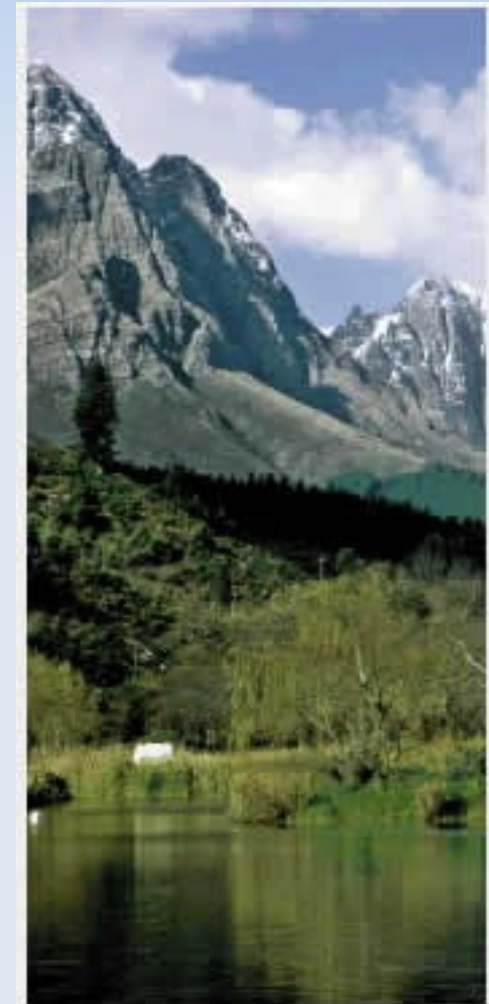
- It has a very simple data model:
 - Portal Types: Client, Contact, AnalysisRequest, Analysis, Sample, AnalysisService, Order, Statement, PriceList, Worksheet.
- And its own workflow:
 - 1. Client submits sample and request analyses on sample
 - 2. Sample arrives in the lab
 - 3. Lab Manager or Lab Clerk assignees it to Lab Technician
 - 4. Lab Technician submits results
 - 5. Lab Manager verifies and publishes results to customer

The BIKA Community

- Many lurkers on the mailing list, lot's of downloads (> 2500) since first public release a year ago, a couple of users, to few developers:
 - 2 at Upfront Systems in Stellenbosch
 - 1 from Bika Labs in Hangklip

Bika Community (cont.)

Stellenbosch



Bika Community (cont.)

Hangklip



Bika Community (cont.)

- Existing users:
 - Breërivier Bottelingskoöperasie (BBK)
 - Cape Wine Lab
 - South Africa Wine Laboratory Association (52 Members)
 - Quantum Analytical Services
 - Portugese Nuclear research agency

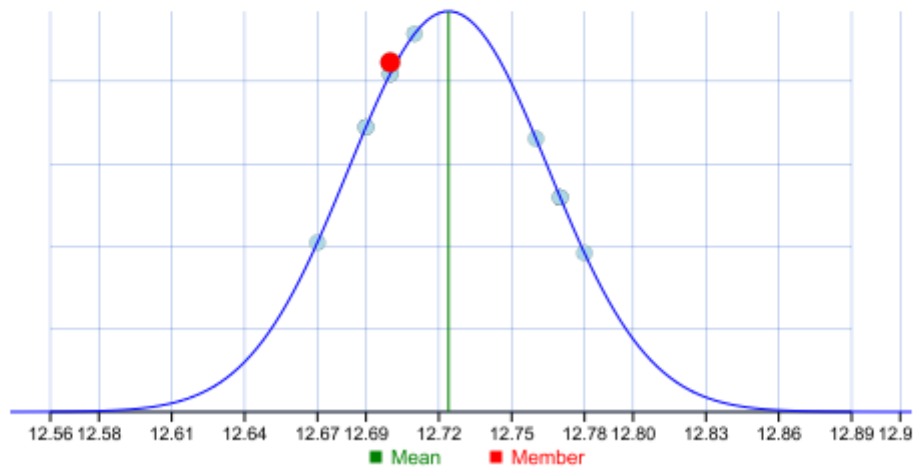
What's new?

- Interlab proficiency testing (will be released in November 2006)
- Bika is ISO 17025 ready (for certification of analysis process)
- Bika 1.2 has just been released

What's new? (cont.)

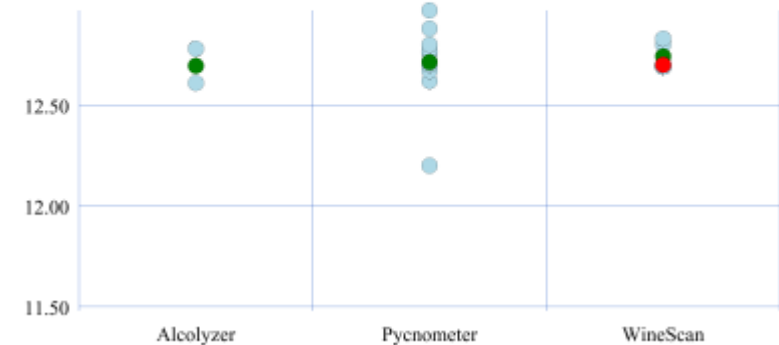
Sample ID	S06-017	Analysis	Alcohol
Sample Type	Off-Dry Red	Result	12.70
Date released	09 Oct 2006 20h20	Status	verified
Performance	A	Z-Value	-0.416

Distribution



	Standard Deviation	Mean
Unadjusted	0.157	12.719
Adjusted	0.066	12.727
Final Mean	0.041	12.724
Amount of Data		18

Results per method



Method	Alcolyzer	Pycnometer	WineScan
Mean %/vol	12.695	12.714	12.742
Number of values	2	11	5

All values

Result	Z-Value	Performance	Method
12.2	-8.210	>E	Pycnometer
12.61	-1.819	B	Alcolyzer
12.62	-1.663	B	Pycnometer
12.67	-0.883	A	Pycnometer
12.69	-0.572	A	WineScan
12.69	-0.572	A	WineScan
12.70	-0.416	A	WineScan
12.70	-0.416	A	Pycnometer
12.71	-0.260	A	Pycnometer
12.76	0.520	A	Pycnometer
12.77	0.675	A	Pycnometer
12.77	0.675	A	Pycnometer
12.78	0.831	A	Alcolyzer
12.80	1.143	B	WineScan

Interlab Statistics