

# Pharo:

A malleable and powerful  
platform

S. Ducasse and M. Denker

<http://www.pharo.org>

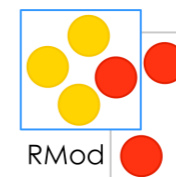


NetStyle



Sensus HighOctane

Pleiad:



# What is it?

- ✦ Language + Environment
- ✦ Simple Language
- ✦ Object-Oriented, Dynamic, Reflective
  - ✦ Explore + Change running systems
- ✦ **The Ultimate Live Programming Environment!**

# Pharo

- ✦ MIT license
- ✦ Pure object language
- ✦ Great community of active doers
- ✦ Powerful
- ✦ Elegant and fun to program
- ✦ Living system under your fingers
- ✦ Mac, Linux, Android, iOS, Windows

- ✦ Compiler, Core classes (stream, collections, unicode,...)
- ✦ IDE (editor, inspector, debugger, code versioning,...)
- ✦ UI frameworks (widgets, theme)
- ✦ FFI
- ✦ Graphics (soon opengl)
- ✦ Hyper fast object serializer
- ✦ Network, HTTP

- ✦ Web frameworks: Seaside, Iliad, HTTP2
- ✦ Parsers: XML, HTML, JSON
- ✦ Graphics frameworks: Roassal, Mondrian, EyeSee
- ✦ Tool builders: Glamour, Moose
- ✦ Databases: DBXTalk, Mongo, Riak, CouchDB
- ✦ Parser generators: Petit Parser, SmaCC
- ✦ Infrastructure: Proxy, Logging
- ✦ Units: Aconcagua, Units
- ✦ ...

# Pharo in numbers

- ✦ 240 000 downloads on the Inria gforge
- ✦ 40-50 active committers
- ✦ > 600 mailing-list members
- ✦ 180 license agreements
- ✦ 50 association members
- ✦ 10 industrial consortium members
- ✦ around 300 external projects

# SmalltalkHub: a new forge

The screenshot shows the SmalltalkHub website interface. At the top left is the logo with a 'BETA' badge. Navigation links for 'Home' and 'Explore' are present, along with a search bar. A greeting 'Happy tuesday!' and links for 'Join or login' are on the right. The main content area features a 'Welcome to SmalltalkHub' heading, a description of the application, and a 'Register!' button. Below this is a warning about exploration features and statistics: 547 repositories, 516 users, and 53548 packages. Two columns list 'Recently registered users' and 'Recently created projects'.

**Smalltalk Hub BETA** Home Explore Search Happy tuesday! Join or login

## Welcome to SmalltalkHub

The free, opensource, Smalltalk projects management application

[No account yet? Register!](#)

**WARNING** The following is a preview of the exploration features of SmalltalkHub. More to come!

**547** repositories, **516** users registered and **53548** packages uploaded.

### Recently registered users

- cdavidshaffer (cdavidshaffer)
- DidierDevroye (Didier Devroye)
- onierstrasz (onierstrasz)
- hfierro (hfierro)
- lanza (lanza)
- RonBeukema (RonBeukema)
- jpanar (jpanar)
- mib (mib)
- craw (craw)
- coldoh (coldoh)
- CarlaGriggio (CarlaGriggio)
- AndrzejDelegacz (AndrzejDelegacz)
- IlmariVacklin (IlmariVacklin)
- nestoryavorsky (nestoryavorsky)

### Recently created projects

- PharoExamples (created the Tue May 14 2013)
- TraitsModel (created the Tue May 14 2013)
- Tables (created the Tue May 14 2013)
- SqueakByExample (created the Tue May 14 2013)
- SplitJoin (created the Tue May 14 2013)
- SOIDavos (created the Tue May 14 2013)
- SOI (created the Tue May 14 2013)
- SCGPier (created the Tue May 14 2013)
- PharoByExample (created the Tue May 14 2013)
- Nanola (created the Tue May 14 2013)
- Sandbox (created the Tue May 14 2013)
- Lab\_4\_new (created the Tue May 14 2013)
- Lab\_4 (created the Tue May 14 2013)
- Lab4\_new (created the Tue May 14 2013)
- LightHouse (created the Tue May 14 2013)



# SqueakSource: old Forge

- ✦ 3672 users
- ✦ 3459 projects
- ✦ 158 987 packages

The image shows the interior of a tokamak fusion reactor, characterized by its complex, multi-layered structure. The central part of the image is dominated by a large, toroidal (donut-shaped) structure, likely the central solenoid or a part of the plasma confinement system. This structure is surrounded by various pipes, cables, and mechanical components. The lighting is a mix of blue and white, highlighting the metallic surfaces and the intricate wiring. The overall scene conveys a sense of advanced technology and engineering.

**A powerful engine  
to invent our future**

Our goal...



**Create an ecosystem  
where business/innovation  
can bloom**

We want that **\*\*you\*\*** can make money with Pharo. We want to invent solutions to existing problems.

We want a powerful **innovative dynamic** language where we can build **our** future.

# Some Pharo's success stories

- ✦ **Seaside.st, SmalltalkHub,**
- ✦ **Yesplan.be, netstyle.ch,**
- ✦ **Pier, DrGeo, VBridge,**
- ✦ **Cmsbox.ch, objectFusion.fr,**
- ✦ **T3 Easy from beta9.be,**
- ✦ **moosetechnology.org, pinesoft.co.uk,**
- ✦ **Airflowing, synectique, miriamTech, 2denker...**

# cmsbox - Content Management for Websites

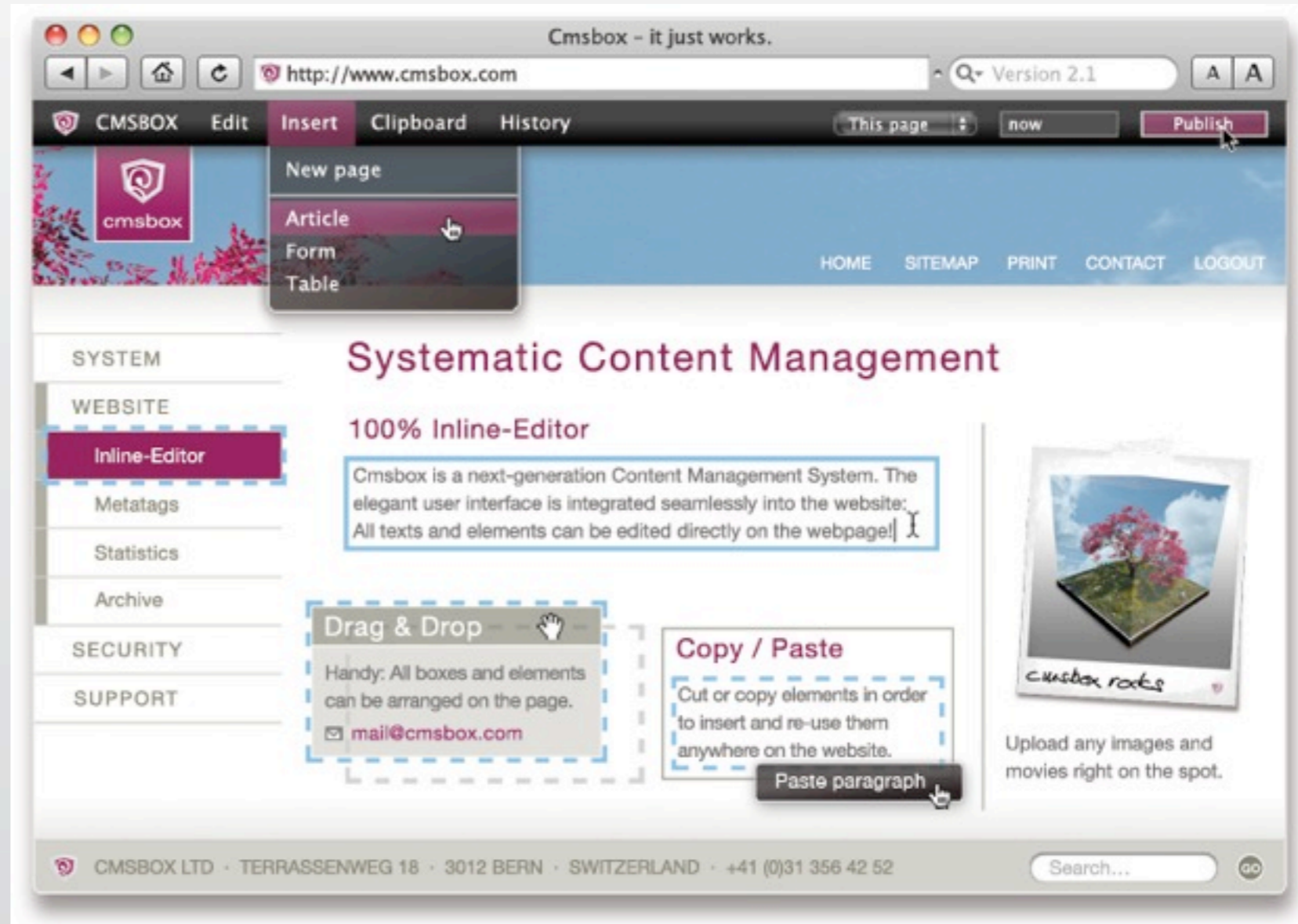
Simple to use, web-based Content Management System for SME websites

Unique User eXperience  
Inline Editor, Drag & Drop,  
Cut & Paste, Undo/Redo

## Advantages

Flexible designs, individual extensions, outstanding performance and stability

Rock solid application that powers over 500 websites



# Website = Editor

# Continuous API Testing

keep your services under control 24/7





# WEBDRUCK.CH Web-To-Print Solution

- Design and create individual printed matter
- eShop with credit card payment
- High quality PDF output with Printing Process integration
- Thousands of orders for seven Swiss printing companies



The screenshot shows the Webdruck.ch website interface. At the top, the logo 'WEBDRUCK.CH' is followed by the tagline 'ONLINE DRUCKEN UND GESTALTEN'. Below this is a navigation menu with links for 'Produkte', 'Über uns', 'Kontakt', and 'Hilfe'. A main banner features a grid of product categories: 'Hochzeitskarten', 'Hochzeitskarten gefalzt', 'Geburtsanzeigen' (marked 'EX-PRESS'), 'Geburtsanzeigen gefalzt' (marked 'EX-PRESS'), 'Postkarten', and 'Karten'. A secondary row includes 'Geschenke', 'Geschäftsdrucksachen', 'Werbung', 'Trauer', 'Flyer', and 'Broschüren'. The central focus is a featured product, 'Geburtsanzeigen gefalzt', with a 'Bestellen' button and a price of 'ab CHF 138.-'. To the right, text describes the design process: 'Gestalten Sie schnell und einfach im WEBDRUCK-Editor oder laden Sie Ihre eigene Datei hoch.' Below this, a list of steps for ordering is provided: 1. Drucksache wählen, 2. Art der Ausführung bestimmen, 3. Online gestalten oder Datei-Upload, 4. Gut zum Druck, 5. Kasse. The bottom section includes a 'Newsletter abonnieren' link, a 'Folgen Sie Webdruck.ch auf Facebook' link, and a footer with payment logos (Visa, Mastercard) and a list of product categories: 'Karten', 'Geschenke', 'Geschäftsdrucksachen', and 'Werbung'.



# NTed: disaster scenario recovery

NTed

- Darsteller
- Interaktionsschema
- Verbindungsstatus
- Events
- Nachrichten

Darsteller <span>+Neuer Darsteller</span>					
Darsteller	Verletzungsmuster	Interaktionsschema	tags	PIN	
Patient 1	Inhalationstrauma	Inhalationstrauma	SK I	EEGB	
Patient 2	Verbrennungen 3. Grad	Verbrennungen 3. Grad	SK I	0MTH	
Patient 3	Verbrennungen 3. Grad	Verbrennungen 3. Grad	SK I	VYW6	
Patient 4	Offener Oberschenkel#	Offener Oberschenkel#	SK I	Z19K	
Patient 5	KoplaWu + SHT 1°	KoplaWu + SHT 1°	SK II	G7DE	
Patient 6	Verbrennungen 2°	Verbrennungen 2°	SK II	WM4G	
Patient 7	Schürfwunde	Schürfwunde	SK III	1S5T	
Patient 8	Schürfwunde	Schürfwunde	SK III	EY0L	
Patient 9	Betroffener	Betroffener	SK III	MUJS	
Patient 10	Betroffener	Betroffener	SK III	SMB3	
Patient 11	Betroffener	Betroffener	SK III	W5UR	

# iBizLog - <http://www.ibizlog.com>

The screenshot shows the iBizLog website interface. At the top left is the logo "iBizLog BETA internet business log". To the right are options for "Language" (set to English) and a "Control Panel" button labeled "PANEL". Below the logo is a navigation menu with links: Home, Sign Up, How it Works, Features, EXAMPLE, and Support. The main content area features a section titled "What is iBizLog?" with a four-step process: 1. Writing on a document, 2. Website design, 3. Typing on a laptop, and 4. A person celebrating. Below this is the text: "It is a simple and easy online system you can use to create your own website online in order to promote and sell your products or services. Create your website now! **START NOW!**". To the right is a large green box titled "Have your WebSite" with a "FREE" starburst and a "Create WebSite" button. Below this are three feature boxes: "Personal Identity and URL" (with a globe icon), "Communication Tools" (with a globe and communication icons), and "Multilingual Menu" (with flags icon). The footer contains social media links (Blog, Facebook, Twitter), a list of pages (About Us, News, Partners, Contact Us, Terms of Service), and the copyright notice "www.BizLog.com - All rights reserved - Copyright ©".

A product by Smallworks



### Dr. Geo gratuit

Hilaire Fernandes



★★★★★ (4)

INSTALLÉ

FREE



Cette application est compatible avec votre Acer A500.

# DR. GEO

FREE

PRÉSENTATION

AVIS DES UTILISATEURS

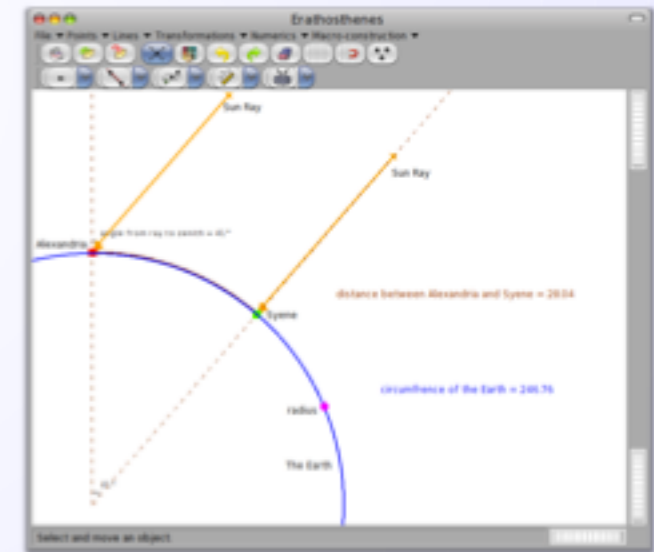
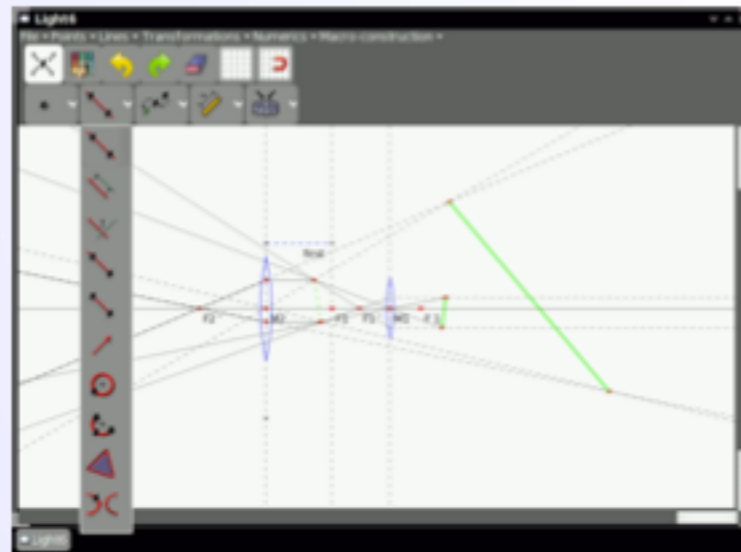
NOUVEAUTÉS

AUTORISATIONS

+1 de vous pour ce contenu

+1 8

# Dr. Geo




[About](#)
[Download](#)
[Tools](#)
[Docs](#)
[Events](#)
[News](#)


## Moose is a platform for software and data analysis.

It is an open source project since 1996. It is supported by several research groups around the world, and it is increasingly adopted in industrial projects.

[Download 4.7](#)
[The Moose Book](#)


enables

**Humane**  
assessment

*the missing software  
engineering method*

www.humane-assessment.com

[Call for help: webpage redesign](#)

29 April 2013

We are starting a project to redesign the Moose webpage. The initial goals of the redesign are: \* ...

[Moose 5.0 roadmap](#)

13 April 2013

A summary of the talk laying out the Moose 5.0 roadmap can be found at: <http://www.humane-assessment...>

[Moose 4.8 development: 4045 green tests](#)

20 March 2013

The move from Pharo 1.4 to Pharo 2.0 is finally complete: all 4045 tests are green. The continuous ...

[Login](#)



[Contact us](#)

[Report an issue](#)

Site powered by [Pier](#)

# Pinesoft MBagger

The screenshot displays the Pinesoft MBagger software interface. At the top left is the Pinesoft logo with the tagline "agile answers". The main area shows a printed label with the following text: "Pinesoft Warranty Parts", a barcode, the number "22489839", "Depot 1 DTR3 Col/Ret", and "A N Other Nails". Above the label are two horizontal sliders with numerical values "14" and "21". To the right of the label area is a control panel with buttons for "Sharpen", "Low/Fine", "Mixed", "High/Bold", "Custom 1", "Custom 2", and "Custom 3". Below these is a printer icon and the text "4\"x3\"", and at the bottom right is an "Auto Print" button. At the bottom left, there is a "Name: Custom 1" field, a keyboard icon, and a "Back" button.

We want more success  
stories!

# Daily Active Development

A massive amount of improvements



# Since may 2008

- ✦ ***Pharo 2.0 - Apr 2013 (1657 closed cases)***
- ✦ Pharo 1.4 - Apr 2012 (988 closed cases)
- ✦ Pharo 1.3 (736 closed cases)
- ✦ Pharo 1.2 - mar 2011 (691 closed cases)
- ✦ Pharo 1.1 - jul 2010 (918 closed cases)
- ✦ Pharo 1.0 - oct 2009 (307 closed cases)

# 2.0 Statistics

- ✦ Started April 2012
- ✦ 1657 issue tracker entries
  - ✦ since start: 7663
  - ✦ 420 open, all have seen activity in 2012
- ✦ 593 incremental updates

# 2.0: Overview

- UI:
  - New UI Builder, Widget enhancements. Layout improvements. Shout Themes
  - Keybindings. New icons. "Growl" style notifications. Rectangle intersection improvements.
- Tools
  - Browser: new default browser, critics browser
  - Spotlight (shift+enter), unify Smartcharacters and completion
- Compiler enhancement: new AST + ErrorNode
- Improved HTTP and SSL
- System

# Vision Document around 2.0

- ✦ <https://gforge.inria.fr/frs/download.php/30434/PharoVision.pdf>

3.1 Towards a small kernel [we have it now we should think about migration]

3.2 Towards a verified package catalog [On the way]

4.1 A Robust and Extensible System Events [Beta and should be in 3.0]

4.2 Rewrite of Filesystem/Streams [DONE for Files]

4.3 Announcements and Ephemeron  
[Announcements Done. More Enh for 3.0]

4.4 UI Canvas for Zoomable Interface [Waiting for TextModel and 3.0]

4.5 Bootstrap of the Core [Done should be integrated in 3.0]

4.6 Fully parametrized compiler tool chain [Start with Opal in 3.0]

4.7 Packages as real objects [in 2.0 and will improve in 3.0]

4.8 Package Meta-Data [Done]

4.9 Less Model Clutter and Duplication [Started in 2.0 will be accentuated in 3.0]

4.10 Building and Reusing UI Logic [First cut in 2.0 UIPainter for 3.0]

4.11 New Network Layer [Nothing]

4.12 Serializers [Done]

4.13 SystemChangeNotifier replacement [Done]

4.14 Cleaning Morphic [To be continued in 3.0]

5.2 VMs identification and regression testing [On the way]

5.3 One Unified FFI framework [before June]

We want to improve the  
**complete** system!

Not just a nice library on top  
of ...

Of course not everything is  
perfect

But we believe in non linear  
growth



We are a cool community



# Companies

[www.10pines.com](http://www.10pines.com)  
[www.2denker.de](http://www.2denker.de)  
[www.agilitic.com](http://www.agilitic.com)  
[www.airflowing.com](http://www.airflowing.com)  
[www.anymorphic.com](http://www.anymorphic.com)  
[www.ardishealth.com](http://www.ardishealth.com)  
[www.beta9.be](http://www.beta9.be)  
[www.bombardier.com](http://www.bombardier.com)  
[www.cmsbox.com](http://www.cmsbox.com)  
[www.finworks.biz](http://www.finworks.biz)  
[seaside.gemstone.com](http://seaside.gemstone.com)  
[www.ibizlog.com](http://www.ibizlog.com)  
[www.inceptive.be](http://www.inceptive.be)  
[www.jooshr.com](http://www.jooshr.com)  
[www.majcon.de](http://www.majcon.de)

[www.mindclue.ch](http://www.mindclue.ch)  
[www.miriamtech.com](http://www.miriamtech.com)  
[www.myneat.org](http://www.myneat.org)  
[www.netstyle.ch](http://www.netstyle.ch)  
[www.objectfusion.fr](http://www.objectfusion.fr)  
[www.panasoft.com](http://www.panasoft.com)  
[www.pinesoft.co.uk](http://www.pinesoft.co.uk)  
[www.promedmedical.net](http://www.promedmedical.net)  
[www.sharedlogic.ca](http://www.sharedlogic.ca)  
[www.smallworks.com.ar](http://www.smallworks.com.ar)  
[www.trantaria.com](http://www.trantaria.com)  
[www.square-i.net](http://www.square-i.net)  
[yesplan.be](http://yesplan.be)

# Lectures

University of Buenos Aires

University of Bern [scg.unibe.ch](http://scg.unibe.ch)

University of Brussels [soft.vub.ac.be/soft/](http://soft.vub.ac.be/soft/)

Ecole des Mines [www.ensm-douai.fr](http://www.ensm-douai.fr)

Université de Savoie [www.imus.univ-savoie.fr](http://www.imus.univ-savoie.fr)

Ivan Franko National University of Ukraine

Czech Technical University

University of Life Sciences in Prague

Northen Michigan University [www.nmu.edu](http://www.nmu.edu)

University Catholic of Argentina [www.uca.edu.ar](http://www.uca.edu.ar)

University of Santiago [www.uchile.cl](http://www.uchile.cl)

Universitat Policnica de Catalunya [www.upc.edu](http://www.upc.edu)

# Research Groups

Lafhis (University of Bueno Aires )

Software Composition Group ([scg.unibe.ch](http://scg.unibe.ch))

CAR (Ecole des mines [www.ensm-douai.fr](http://www.ensm-douai.fr))

RMOD (Inria)

Ummisco (IRD)

Reveal (University of Lugano)

Lysic (University of Bretagne Occidentale)

Pleiad (University of Santiago)

CEA-List

# New Dev Process

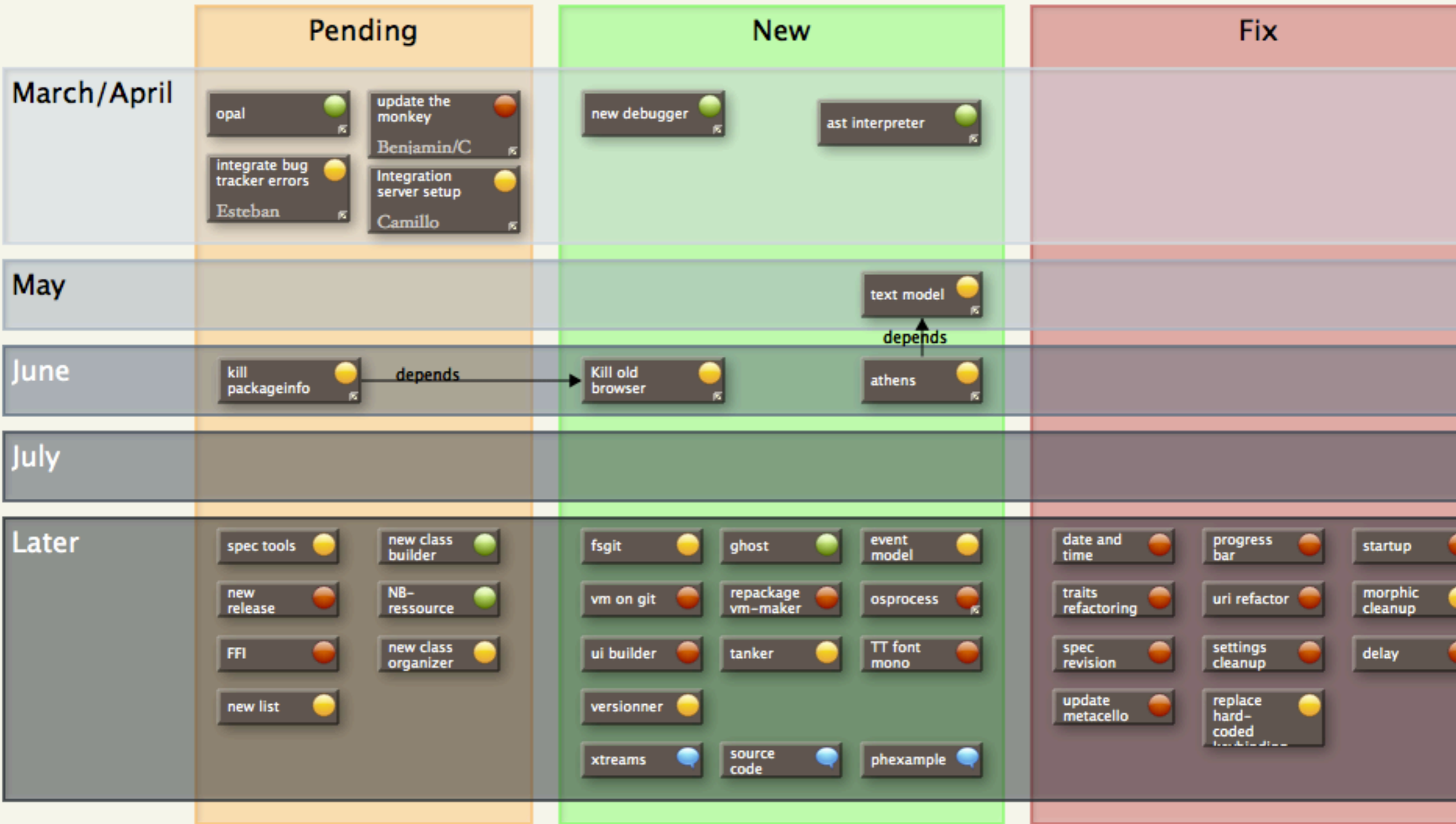
- ✦ To galvanize and stabilize a long cycle
- ✦ Chunked per month
- ✦ Retrospective analysis
- ✦ Continue to have a Summer release and an alpha

# Community Ongoing Work

- Better widgets, UI Builder (A. Plantec, G. Chambers, B. van Ryseghem)
- Better browsers (B. van Ryseghem, C. Bruni)
- Proxy (M. Martinez-Peck)
- New compiler (J. Ressia/M. Denker/C. Bera/)
- Vectorial canvas (I. Stasenko)
- Better FFI (I. Stasenko, E. Lorenzano)
- Bootstrap (G. Polito/S. Ducasse/N. Bouraqadi/L. Fabresse)
- PDF generation (O. Auverlot, G. Larcheveque)
- Network (WebSocket, Oauth, Zinc, Zodiac S. van Caekenberghe)

# Glimpse at 3.0

- ✦ OPAL visitor and IR compilation chain
- ✦ Athens (vector graphics)
- ✦ Integration process
- ✦ New widgets
- ✦ UIPainter
- ✦ Validated packages



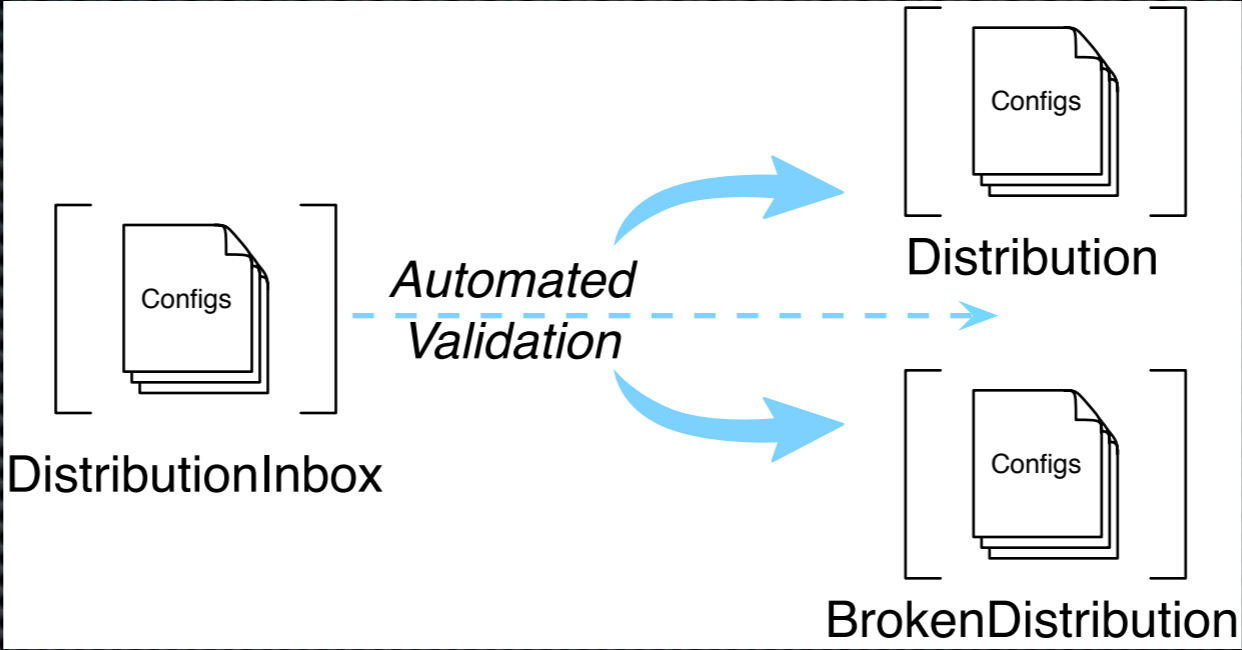


# Distributions: towards a certified catalog

- ✦ I want to go to Mars with just a DVD,
- ✦ and still be able to load the projects I want,
- ✦ and get the right ones loaded.

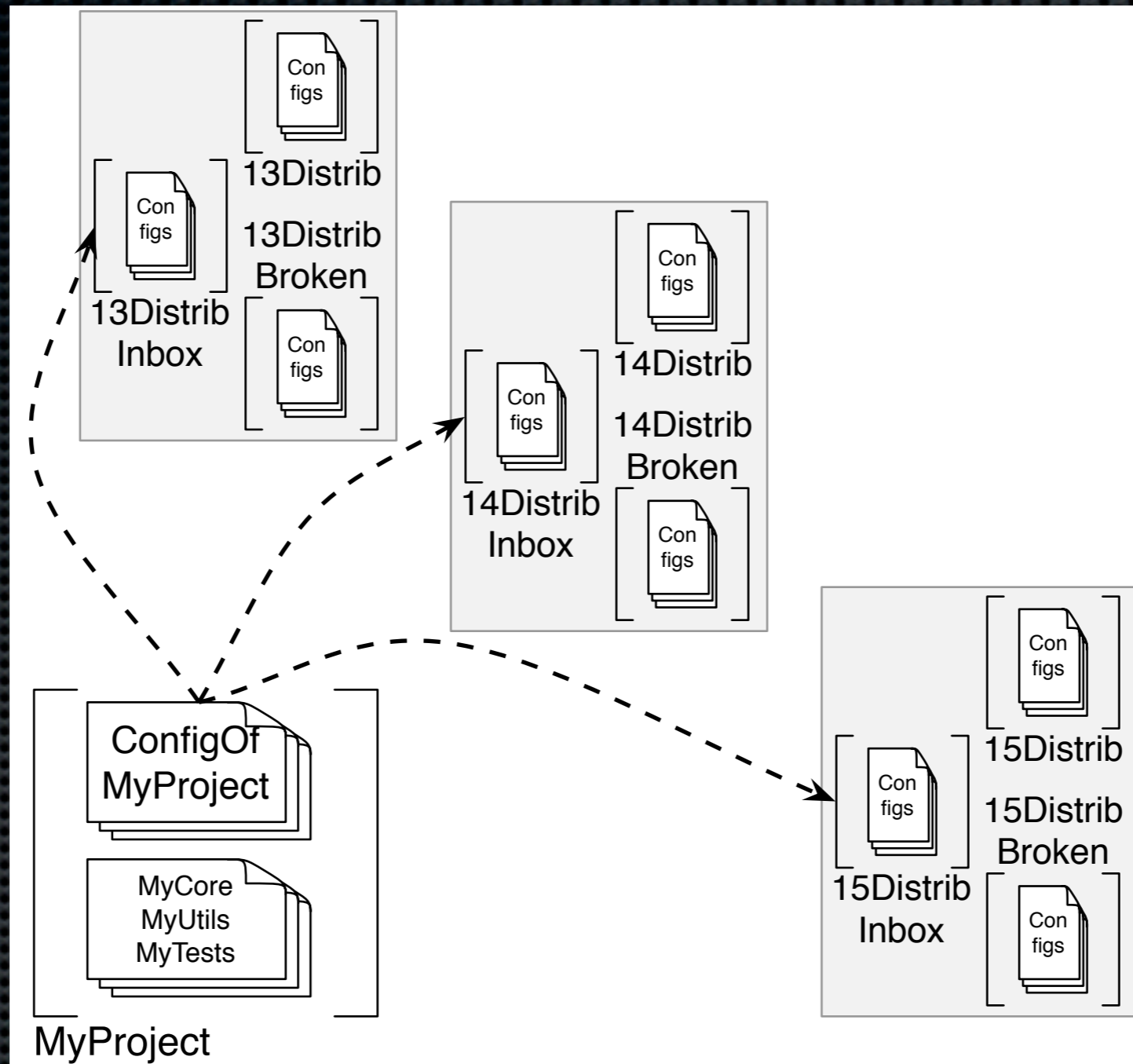
# Package certification

- ✦ Packages should be more self contained
- ✦ Tests
- ✦ LintRules
- ✦ Meta data
- ✦ Run and automatically certified

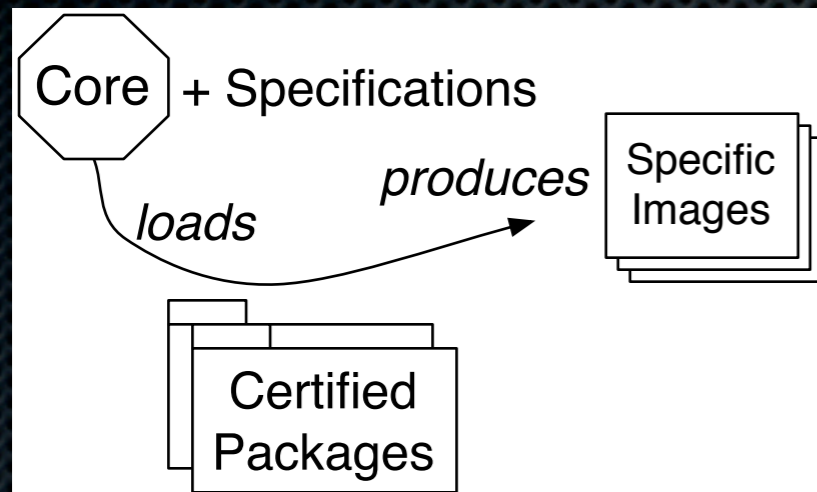


# Process

- ✦ You use Metacello!
- ✦ You publish in your repo!
- ✦ When you want you can release code to a distribution
- ✦ All the code then is recursively copied to the distribution space
- ✦ All the **tests and quality rules** are checked
- ✦ People use your code but with a certain level of confidence :)



# Core and ...



# Consortium & Association

- ✦ How to sustain Pharo?
- ✦ How to structure the community?
- ✦ Let us talk about it tomorrow :)



Pharo is a clean, innovative, open-source Smalltalk-inspired environment. Pharo's goal is to deliver a clean, innovative, free open-source Smalltalk-inspired environment. By providing a stable and small core system, excellent dev tools, and maintained releases, Pharo is an attractive platform to build and deploy mission critical Smalltalk applications. The license of Pharo is MIT with some original parts remaining under the Apache License. All contributors are required to sign our license agreement.

The consortium is for legal entities, if you are an individual that wants to support Pharo participate to the [Pharo association](#).

## Industrial members

 Golden



## Pharo consortium portal

*A clean, innovative, open-source, Smalltalk-inspired environment.*

### What's new ([See all](#))

#### [A new age for Pharo](#)

*1 March 2013 5:37:47 pm by Stéphane Ducasse*

After some efforts, we are proud to announce the consortium around Pharo. With such consortium companies and academic partners will be able to collaborate and sustain the development of the Pharo envi...

[Entries \(RSS\)](#) and [Comments \(RSS\)](#)



# Consortium Members

- ✦ Managed by Inria for now
- ✦ Who: companies, institutions, user groups
- ✦ Privileged access to the **core** development team
- ✦ Influence **priorities** of the next development
- ✦ **Engineering support time**
- ✦ Job posts
- ✦ Training/Conferences special prices

# Pharo User Association



This is the **Pharo** users association site

*Pharo is a clean, innovative, open-source Smalltalk-inspired environment.*

[Home](#)

[Members](#)

[News](#)

[About](#)

# Pharo User Association

- ✦ Managed by the Pharo Association
- ✦ Individuals
  - ✦ Premium (99 Euros)
  - ✦ Normal (40 Euros)
- ✦ Join and participate what we do!

# Pharo books

- ✦ Pharo by example
  - ✦ translated to french, merci!
  - ✦ translated to spanish, gracias!
  - ✦ translated to japanese, ありがとう!
- ✦ german started

# New books are coming

- ✦ Deep into Pharo
- ✦ Pharo for the Enterprise
  - ✦ If you want to contribute...
- ✦ A glimpse at VM

The future is what we do!

Every **single** contribution is  
**important**

# Everybody can help

- ✦ Reporting bugs
- ✦ Confirming bugs
- ✦ Writing tests
- ✦ Writing examples
- ✦ Writing comments
- ✦ Simple contributing fixes
- ✦ Discussion, feedback



# Open Pharo Sprints

May 2008 Bern

July 2009 Bern

October 2009 Lille

November 2009 Buenos Aires

March 2010 Bern

May 2010 Buenos Aires

June 2010 Bern

June 2010 Bruxelles

July 2010 London

September 2010 Barcelona

September 2010 Lille

January 2011 Lille

July 2011 Lille

October 2011 Bruxelles

February 2012 Bern

October 2012 Bern

April 2012 Lille

August 2012 Ghent

October 2012 Perto Madryn

January 2013 Santiago

February 2013 Lille

April 2013 Lille



*PharO*

<http://www.pharo.org>



# Join Us

Creating good energy,  
software quality,  
learning and having fun

<http://pharo.org>