

# Pragmatic Plone Projects

Plone Conference 2012  
Arnhem

Andreas Jung

ZOPYX Ltd.

[www.zopyx.com](http://www.zopyx.com), [info@zopyx.com](mailto:info@zopyx.com)

# Speaker

- long-time Python, Zope, Plone developer and contributor
- Lead developer and principal consultant of ZOPYX Limited
  - Zope, Python, Pyramid, Plone projects
  - large portals, intranet, internet, extranet
  - Electronic Publishing
  - complex domain-specific applications

# This talk is about

- practical hints surviving your next Plone project
- best practices
- lessons learned from our last larger Plone project
- stuff perhaps covered already by the Plone trainings

# Relaunch weishaupt.de

- Weishaupt:
  - major vendor of heating systems
  - 480 M€ revenue
- Large company portal on top of Plone 4.2
- Phase 1:
  - implementation and DE content
  - 4 months
- Phase 2:
  - 20 subsidiaries
  - more than 30 languages

# Funktionsweise der Wärmepumpe



► Heizungserneuerung



► Neubau



► Service 24/7

# Gas-Brennwertgerät Weishaupt Thermo Condens WTC-GW (15 bis 60 kW)

Allgemein

Informationsmaterial

Wasssererwärmer

Referenzen

## Beschreibung

**Weishaupt Gas-Brennwertsysteme** nutzen nahezu den vollen Energiegehalt des Brennstoffs und wandeln ihn effizient in Wärme um. Die Energie, die bei älteren Heizsystemen über die Abgase verloren geht, nutzt das Brennwertgerät und steigert damit den Norm-Nutzungsgrad im Vergleich zu Niedertemperatur- systemen von unter 100 auf rund 110 Prozent.



Weishaupt Thermo Condens WTC-GW

# Weishaupt Niederlassungen

tübingen

Druckdarstellung

**- weishaupt -**

**Werksvertretung Baumann**  
Am Heilbrunnen 78  
DE-72766 Reutlingen  
Tel: 07121 9469-0  
Fax: 07121 9469-80  
E-Mail: baumann.weishaupt@t-online.de

**- weishaupt -**

**Niederlassung Stuttgart**  
Schelmenwasenstraße 2  
DE-70567 Stuttgart  
Tel: 0711 72060-0  
Fax: 0711 72060-80  
E-Mail: nl.stuttgart@weishaupt.de

**- weishaupt -**

Map data ©2012 GeoBasis-DE/BKG (©2009), Google, Tele Atlas - [Terms of Use](#)

# Standorte International

Afrika

Asien & Naher Osten

Australien & Ozeanien

Europa

Nordamerika

Südamerika

- ▶ Belgien
- ▶ Bosnien Herzegowina
- ▶ Bulgarien
- ▶ Dänemark
- ▼ Deutschland

## **Weishaupt Hauptverwaltung**

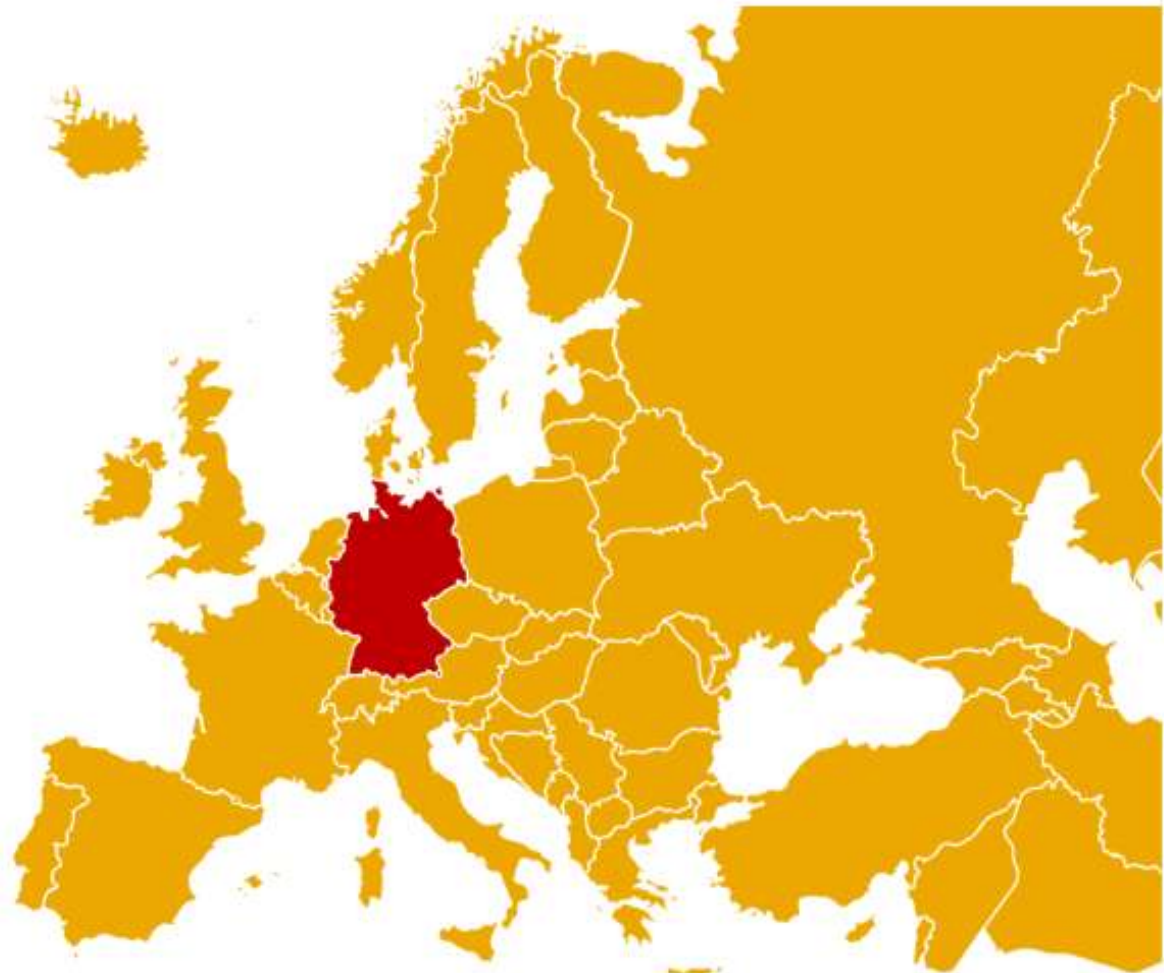
### **Max Weishaupt GmbH**

Max-Weishaupt-Straße 14  
88477 Schwendi

Tel +49 7353 83-0  
Fax +49 7353 83-358

[www.weishaupt.de](http://www.weishaupt.de)  
[info@weishaupt.de](mailto:info@weishaupt.de)

- ▶ Estland
- ▶ Finnland
- ▶ Frankreich
- ▶ Griechenland
- ▶ Großbritannien
- ▶ Irland
- ▶ Italien
- ▶ Kroatien
- ▶ Lettland
- ▶ Litauen



# Weishaupt Luft/Wasser-Wärmepumpen (WWP L I) zur Innenaufstellung

Allgemein

Mediathek

Informationsmaterial

Wassererwärmer

## Willi und die Wärmepumpe



### Willi und die Wärmepumpe

Wie man Wärme aus der  
Erde holt

07:04 min



### Wärmepumpen für jeden Bedarf

04:57 min

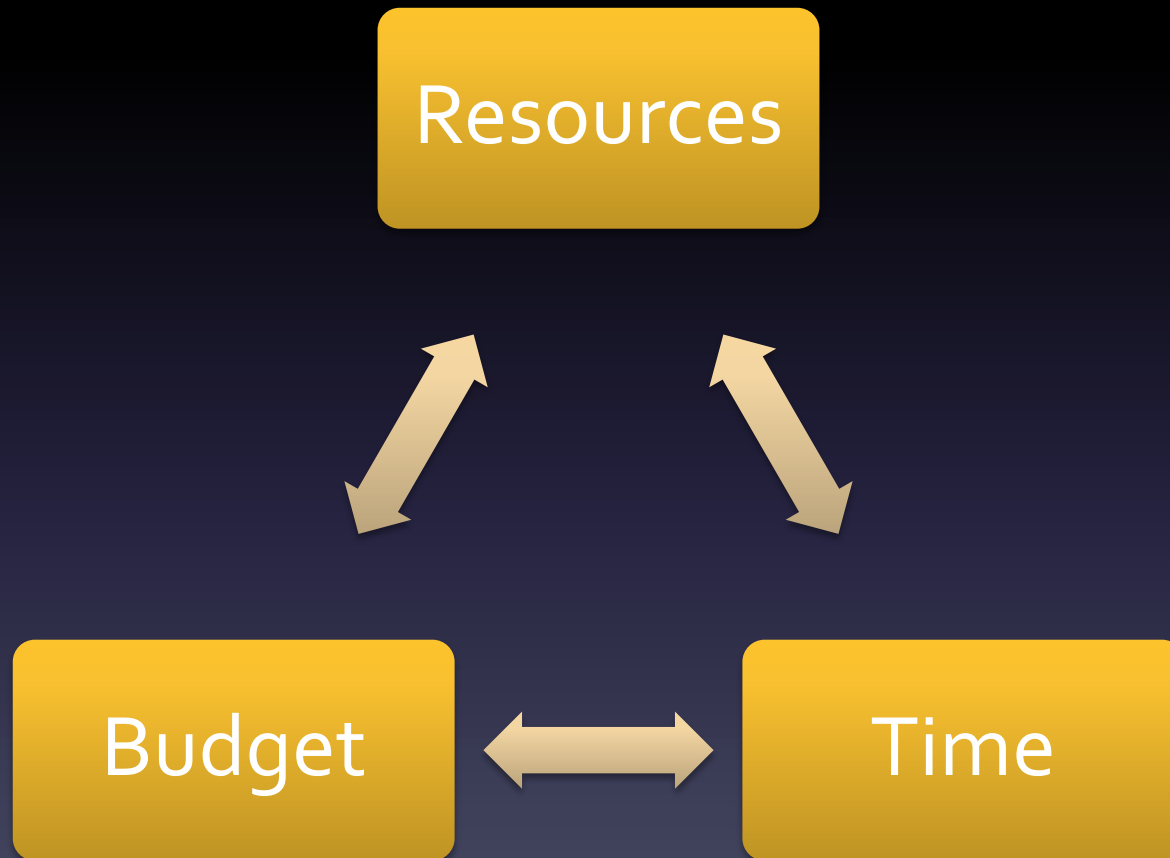


# Project constraints (1/3)

There is no real-world project with

- unlimited budget
- unlimited human resources
- unlimited time

# Project constraints (2/3)



# Project constraints (3/3)

## Conclusions

- usually impossible finding the „perfect“ solution
- the „perfect“ solution is „mission impossible“

# Getting things done

- within a reasonable time-frame
- on budget
- with the available human resources

# Common customizations

- Bugs in Plone and 3rd-party packages are all around you
- Particular behavior of Plone or 3rd-party packages is a common project requirement
- What must be usually customized:
  - Python code (browser views, skin scripts)
  - Resources (browser view templates, JS, CSS)

# Where to **fix** things?

- Package maintainer (Plone and 3rd-party) love
  - bug reports
  - bug fixes
  - contributions
- Stuff on Github: Fork & Pull request
- SVN repositories: svn branch & svn merge
  - check if the package is maintained
  - ask the maintainer for merging your changes or merge yourself
  - move packages to Github if appropriate

# Where and how to **customize** things?

- Is your required change of interest for the public?
  - fork on Github
  - branch in SVN
  - speak with the package maintainers
- Your change satisfies an absurd customer request?
  - keep it for yourself.

# (Monkey) Patching Python code

- **Monkey patching:**

„dynamic modifications of a class or module at runtime“

(Source: Wikipedia)

- MP in general should be considered evil and bad-style
- MP may have side-effects
- Use MP carefully (and only when you know what you are doing)

# Monkey patching in Python

| Original (foo.py)                                                       | Patched version (my_foo.py)                                                                                                                                                              |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre>class Foo:<br/><br/>    def bar(self):<br/>        return 42</pre> | <pre>def my_bar(self):<br/>    return 43<br/><br/>from foo import Foo<br/>Foo.bar = my_bar<br/><br/># or (needed in some situations)<br/><br/>Foo.bar.func_code = my_bar.func_code</pre> |

# Monkey patching Plone

## collective.monkeypatcher (patches.zcml)

ZCML-level configuration of patching information:

- module-level patches
- class-level patches

```
<configure...>
  <include package="collective.monkeypatcher" />
  <monkey:patch
    description="ISE-42: OFS.Image.tag()"
    class="Products.CMFCore.FSImage.FSImage"
    original="tag"
    replacement=".patches.tag"
  />
</configure>
```

## collective.monkeypatcherpanel (patches.zcml)

### Monkey Patches

Note that we show only monkey patches installed through **collective.monkeypatcher**. Other monkey patches may have been installed through other means.

ISE-42: OFS.Image.tag()

**Original** Products.CMFCore.FSImage.FSImage.tag

**Replaced by** weishaupt.policy.patches.tag

**ZCML** File "/home/ajung/sandboxes/weishaupt/src/weishaupt.policy/weishaupt/policy/patches.zcml", line 8.4-13.10

wh\_skin cookie support

**Original** Products.CMFCore.Skinnable.SkinnableObjectManager.changeSkin

**Replaced by** weishaupt.policy.patches.changeSkin

**ZCML** File "/home/ajung/sandboxes/weishaupt/src/weishaupt.policy/weishaupt/policy/patches.zcml", line 49.4-54.10

# Patching resources (1/2) – overrides.zcml

- Standard mechanism for overriding configuration settings introduced through a different package
- *overrides.zcml* is an optional ZCML configuration file

## Products.PloneGlossary (configure.zcml)

```
<configure..>
  <browser:page
    name="glossary_main_page"
    for="Products.PloneGlossary.IPloneGlossary"
    class=".pages.GlossaryMainPage"
    permission="zope2.View" />
</configure>
```

## my.package (overrides.zcml)

```
<configure..>
  <browser:page
    name="glossary_main_page"
    for="Products.PloneGlossary.IPloneGlossary"
    class=".glossary.GlossaryView"
    permission="zope2.View" />
</configure>
```

# Patching resources (2/2) – z3c.jbot

- z3c.jbot allows you to override resources of other packages inside your own policy package
- Limited to .pt, .cpt, .js?!

**Configuration:** `<browser:jbot directory="overrides" />`

**Existing template:** `plone.app.search/plone/app/search/search.pt`

**Customization:** `your.package/your/package/overrides/plone.app.search.search.pt`

## Links

- <http://blog.keul.it/2011/06/z3cjbot-magical-with-your-skins.html>
- <http://pypi.python.org/pypi/z3c.jbot>

# Unconfigure resource configurations

- Sometimes you just don't want or need ZCML configurations introduced by other packages
- `z3c.unconfigure` is your friend

| some.package(configuration.zcml)                                                                                                                                                                                                                                             | my.package (configuration.zcml)                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre>&lt;configure..&gt;<br/>  &lt;browser:page<br/>    name="glossary_main_page"<br/>    for="Products.PloneGlossary.IPloneGlossary"<br/>    class=".pages.GlossaryMainPage"<br/>    permission="zope2.View" /&gt;<br/>&lt;/configure&gt;</pre> | <pre>&lt;configure..&gt;<br/>  &lt;include package="z3c.unconfigure"<br/>    file="meta.zcml" /&gt;<br/>  &lt;unconfigure&gt;<br/>    &lt;browser:page<br/>      name="glossary_main_page"<br/>      for="Products.PloneGlossary.IPloneGlossary"<br/>      class=".glossary.GlossaryView"<br/>      permission="zope2.View" /&gt;<br/>  &lt;/unconfigure&gt;<br/>&lt;/configure&gt;</pre> |

# Extending schemas

Plone comes with two content-type systems

- Archetypes (old-style)
  - use `archetypes.schemaextender`
  - modify any AT-based content-type (modifying fields, adding fields)
  - *SchemaExtender*, *SchemaModifier*
- Dexterity (new-style)
  - Dexterity introduces „behaviors“
  - „A behavior is a re-usable aspect of an object that can be enabled or disabled without changing the component registry“  
(Source: Dexterity developer manual)

# Keep your designer happy

Implementing CSS styles  
requires representative content



<http://localhost:8080/@@new-site?content=1>

# Auto-generated content

## Wärmepumpen

Netus purus vitae morbi sit odio.

Class fames nostra pellenteque sodales curabitur enim. Proin justo integer conubia ridiculus aenean eu hac cras ardu vel leo at pharetra. Class nulla vehicula. Lorem netus magnis accumsan elementum lacus ipsum congue dictum quisque euismod eget lacus integer. Lacus proin. Purus justo cursus. Pro lacus vivamus montes eu. Proin augue donec lobortis nunc. Justo lorem etiam pede pharetra dictum sollicitudin malesuada tellus morbi vestibulum suspendisse luctus. Proin vitae massa aptent in maecenas sociis fusce. Lorem nulla sagittis vestibulum laconia quam in enim amet cras sodales. Etiam ipsum. Vitae proin etiam curae proin morbi platea magna orci mi. Maecenas fames. Velit netus. Lacus metus. Purus vitae morbi sit odio.

## Fachwortlexikon

A B C D E F G  
H I J K L M N  
O P Q R S T U

Augue fames integer blandit nostra velit augue platea at.

Vitae dolor porta purus suspendisse. Magna nulla. Ipsum morbi erat amet hac bibendum. Morbi proin bibendum mus amet facilisis auctor. Fames lorem tincidunt luctus diam. Felis etiam. Lacus donec sapien nostra nisi quis proin lorem vivamus rutrum fames tempus. Netus velit magnis curabitur. Purus netus. Curae purus ullamcorper ve sociis dictumst metus in risus maecenas diam. Netus porta. Class

## Messekalendar

### Messen Europa

| Datum                   | Titel der Messe                                              | Ort/Land |                     |
|-------------------------|--------------------------------------------------------------|----------|---------------------|
| 02.01.2013 - 04.01.2013 | Risus neque maecenas.                                        | Schwendi | ► Details zur Messe |
| 14.07.2013 - 16.07.2013 | Etiam morbi orci venenatis eu dignissim.                     | Schwendi | ► Details zur Messe |
| 06.09.2013 - 08.09.2013 | Lacus felis nibh.                                            | Schwendi | ► Details zur Messe |
| 20.10.2013 - 23.10.2013 | Nulla class libero justo adipiscing lobortis.                | Schwendi | ► Details zur Messe |
| 18.10.2014 - 19.10.2014 | Justo lacus primis mollis urna sociis in enim mi litora.     | Schwendi | ► Details zur Messe |
| 25.04.2015 - 26.04.2015 | Vitae class tellus maecenas venenatis neque sed fusce massa. | Schwendi | ► Details zur Messe |
| 24.03.2016 - 25.03.2016 | Velit lacus nulla dis metus.                                 | Schwendi | ► Details zur Messe |
| 04.04.2016 - 07.04.2016 | Netus velit scelerisque suscipit phasellus fusce.            | Schwendi | ► Details zur Messe |

# Predefined sample content

- Write a browser view
  - creating a Plone site with policy package + add-ons
  - installing the basic site-structure
  - creating example content for each content-type, content-listing etc
- use <http://loempixel.com/600/400> ...
- look at *loremipsum*, *collective.loremipsum* or *zopyx.ipsumplone*

# Predefined sample content

- Throw your sandbox/Plone working site away as often as possible
- sometimes I created 30-40 new Plone sites per day
- Pragmatic side-effect
  - the content fixture code can be used as unit test where all your content-types and site-infrastructure is created and tested in one run
  - not the best solution but it works reasonably well

# Some good hints

- **Never ever** perform customizations in-place in existing 3rd-party packages. **NEVER!!!**
- Customizations **always** belong into your own policy package.
- Local customizations of 3rd-party package will be lost with the next version of customized package.

# Questions?