14.–17. 09. 2009
in Nürnberg

Herbstcampus

Wissenstransfer
par excellence

A New Hope

The D-Machinery

Stephan Pudig

PSI Systems GmbH

PSI Systems GmbH

The D-Machinery

A New Hope

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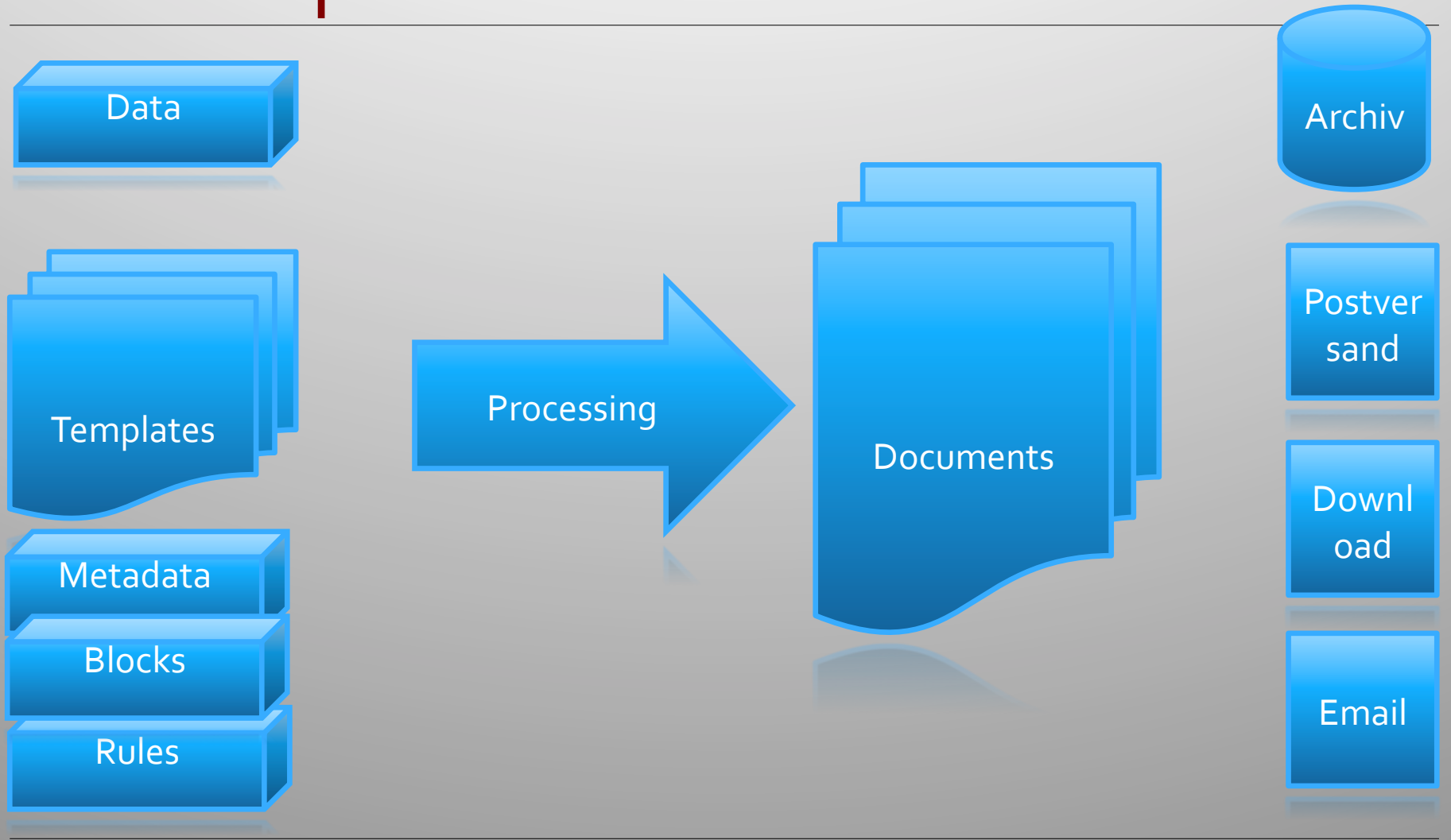
Anforderungen an ein OMS ?

PSI Systems GmbH

- Unterstützung verschiedener Ausgabeformate
- Onlinedruck
- Batchdruck
- Versionierung (gültigab)
- Optimierte Dokumente (Grösse, PDF Version)
- Monitoring

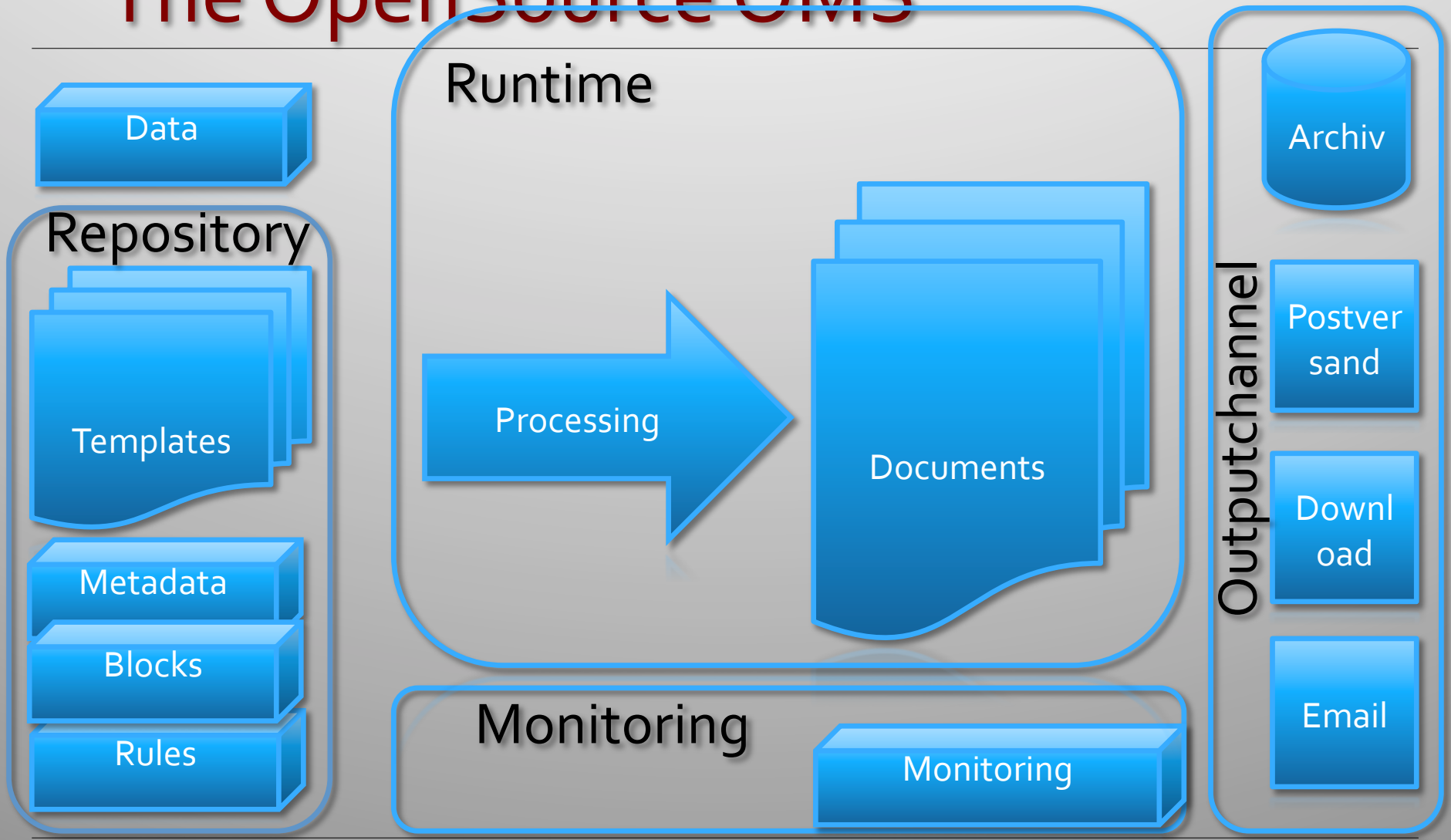
D-Machinery
The OpenSource OMS

PSI Systems GmbH



D-Machinery
The OpenSource OMS

PSI Systems GmbH



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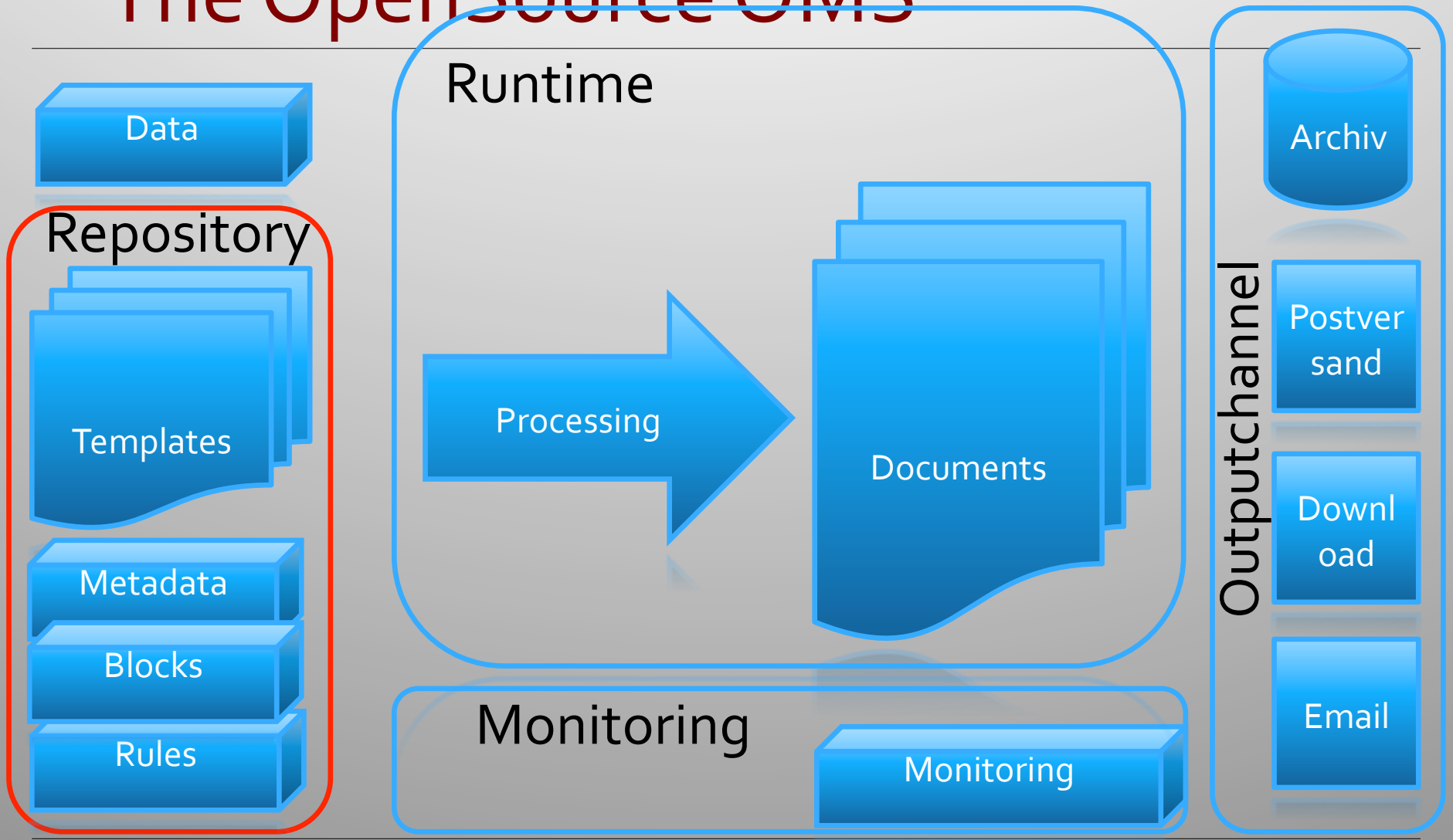


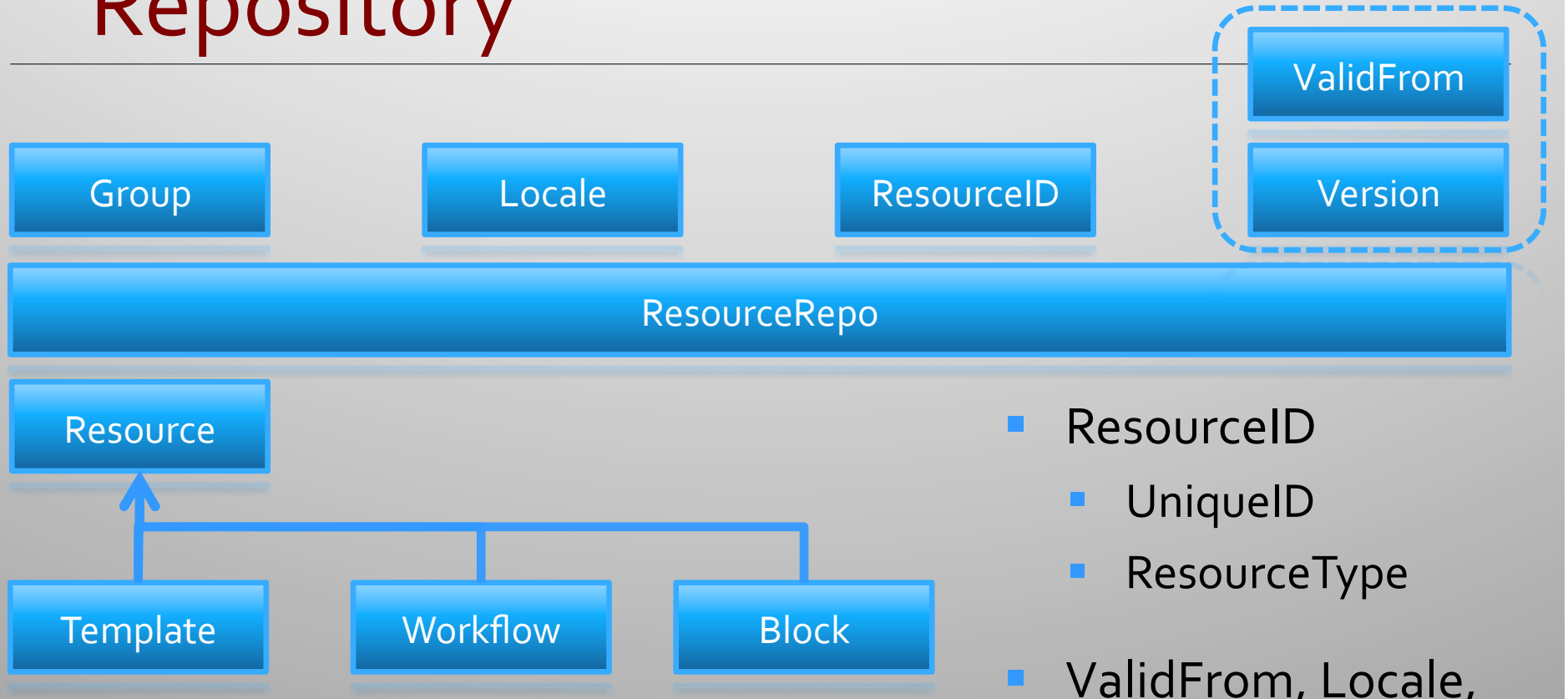
Das D-Machinery Repository

PSI Systems GmbH

- Mandantenfähig
- Versionierbar
- Internationalisiert
- Erweiterbar
- Referenzimplementierung Filebasiert

Das D-Machinery Repository

PSI Systems GmbH



- Blocks
- Templates

- ResourceID
  - UniqueID
  - ResourceType
- ValidFrom, Locale, Group, Version
- URL, Repository, Metadata

Templates

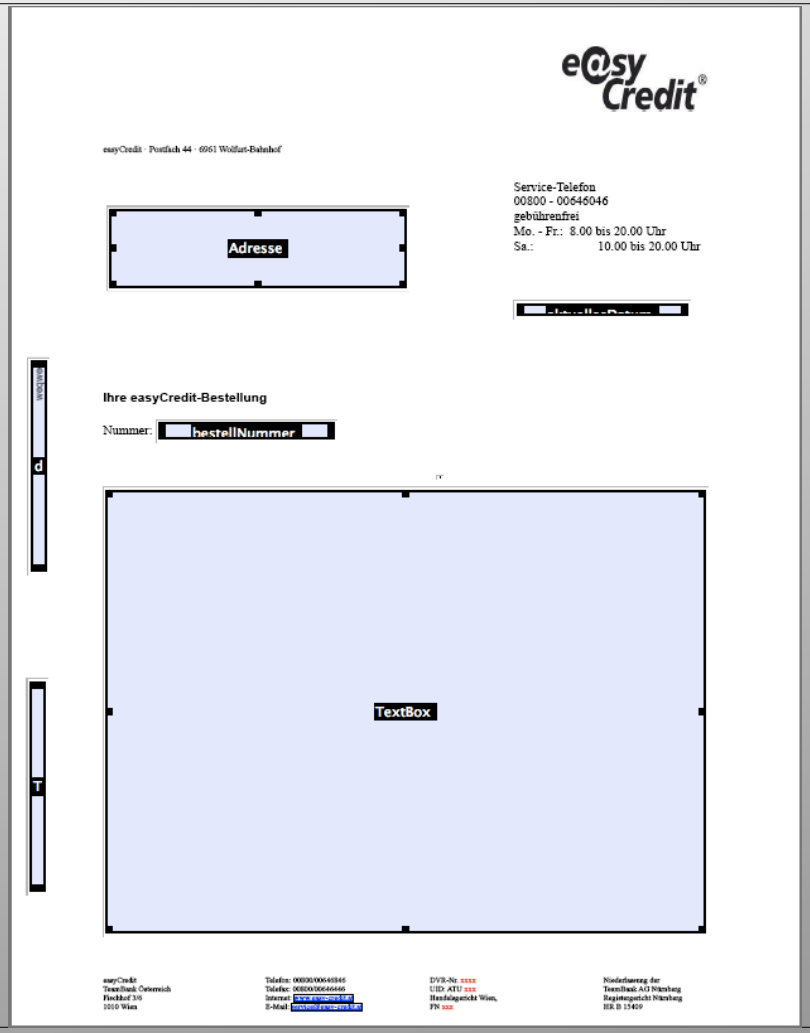
PSI Systems GmbH

- Buildin
  - PDF
  - XSL
  - XSLFO
- Erweiterbar durch plugable PrintEngines

Templates PDF

PSI Systems GmbH

- ITextPrintEngine
- OpenOffice, MS Word, Acrobat Professional
- Statischer Content
  - Formulare
  - Merkblätter
  - ...
- Acrofields



Templates XSLFO

PSI Systems GmbH

- XSLFOPrintEngine
- Apache FOP
- XML Editor
- OpenOffice per XML-Filter
  - office2fo
- ab 2010 D-Machinery OpenOffice Extension

master.xslfo

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/
Transform"
    xmlns:fo="http://www.w3.org/1999/XSL/Format"
    xmlns:xalan="http://xml.apache.org/xalan" extension-element-
prefixes="xalan"
    xmlns:pdp="http://ns.easycredit.de/ed02/sys/print/pdp"
    xmlns:pdp-ds="http://ns.easycredit.de/ed02/sys/print/pdp/datasets"
    xmlns:pdp-tb="http://ns.easycredit.de/ed02/sys/print/pdp/
textblocks"
    xmlns:pdp-d="http://ns.easycredit.de/ed02/sys/print/pdp/data"
    xmlns:svg="http://www.w3.org/2000/svg">

    <xsl:import href="footer.xslfo"/>
    <xsl:import href="header.xslfo"/>

    <xsl:import href="document_id.xslfo"/>
    <xsl:import href="blocks.xslfo"/>

    <!--
    | Include the common constants templates.
    +-->
    <xsl:include href="constants.xsl"/>

    <xsl:variable name="dokumentname">sample</xsl:variable>


    <xsl:template match="/">
        <fo:root xmlns:fo="http://www.w3.org/1999/XSL/Format">
            <xsl:call-template name="layout"/>

            <fo:page-sequence master-reference="spm0">
                <fo:static-content flow-name="xsl-region-before">
                    <xsl:call-template name="header"/>
                </fo:static-content>
                <fo:static-content flow-name="xsl-region-after">
                    <xsl:call-template name="footer"/>
                </fo:static-content>

                <!--xsl:call-template name="MASTER_DOKUMENTNAME"/-->
                <xsl:call-template name="documentID"/>
                <!--body-->

                                Page 1
```

Blocks

PSI Systems GmbH

- Text Snippets
  - XSL
  - XSLFO
  - Text
  - JasperReports SubReports

```
Logo.txt

    logo.jpg

FooterPart1
    Niederlassung der
        TeamBank AG
    Registergericht
        N&#252;rnberg
    HR B 15409


Betreff
    Nummer: <xsl:value-of
        select="~.....antrag/
        antragnummer"/>
```

Template Blocks

PSI Systems GmbH

- RuleEngine
  - BuildIn Beanshell später BSF
  - Erweiterbar durch plugable RuleEnginges

```
import
    de.psisystems.dmachinery.Si
    mplePrintServiceTestData;

SimplePrintServiceTestData
    theData =
    (SimplePrintServiceTestData)
    data;

addBlock("LOGO");

addBlock("SENDER");

if(data....)

addBlock("ADDRESS");
```

Workflow Templates

PSI Systems GmbH

```
addTemplate("CONTRACT");

if(data.hasSecondCustomer()){

addTemplate("CONTRACT");

}

addTemplate(toURL("file://xyz.pdf"));



...
```

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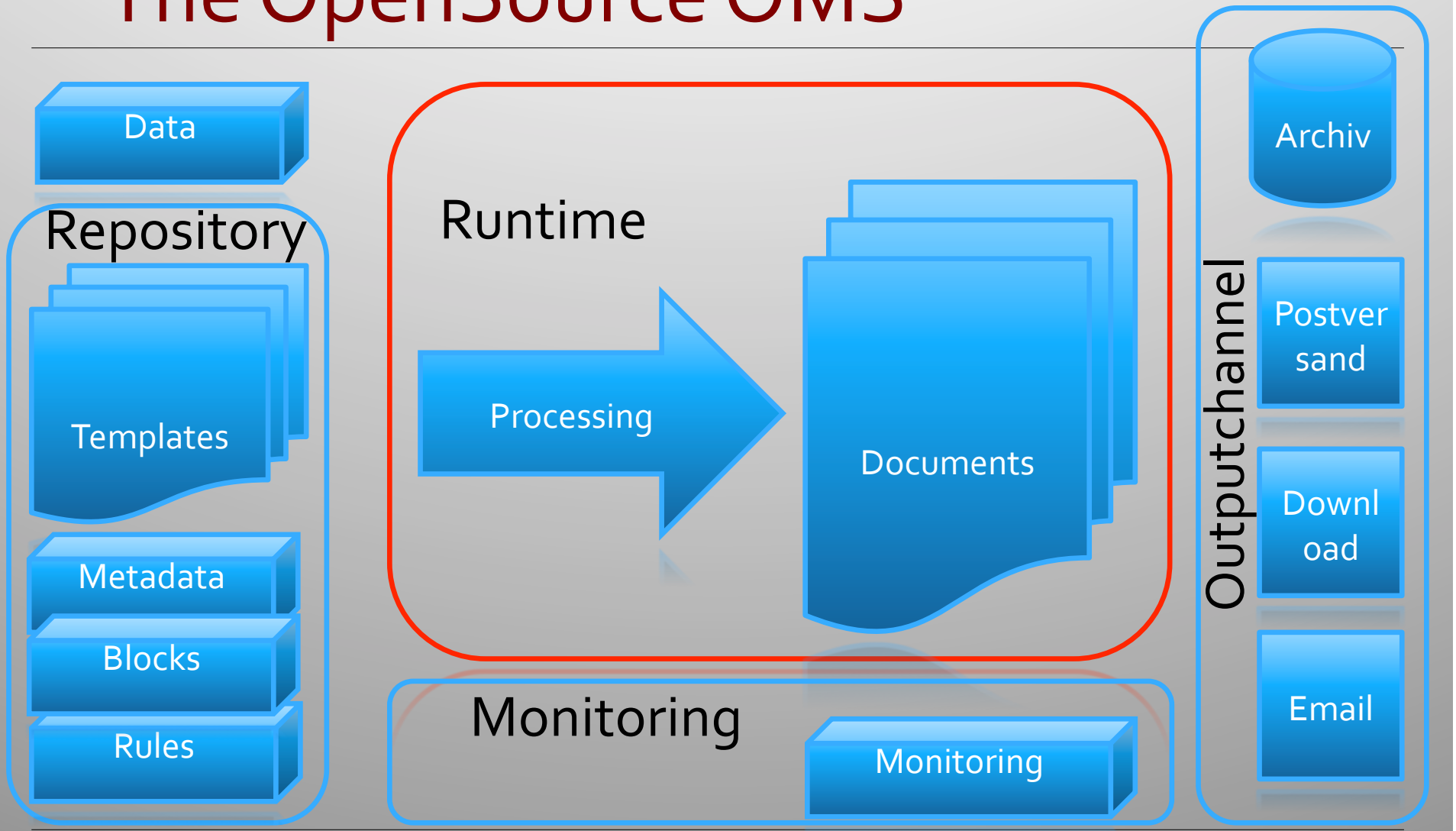
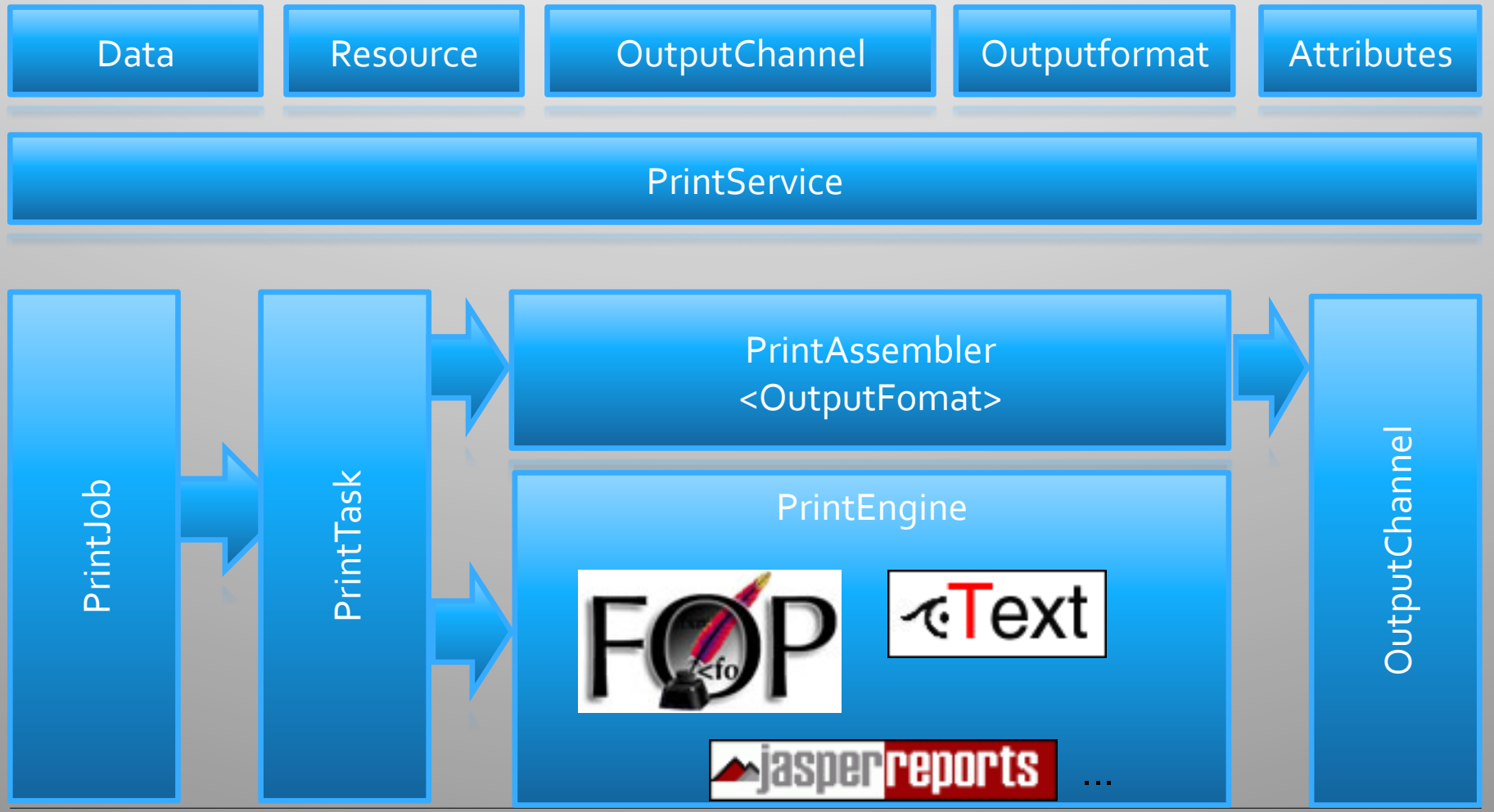


Runtime

PSI Systems GmbH



Runtime PrintService

PSI Systems GmbH

- create Printjob
- create PrintTask via Factory

Runtime PrintJob

PSI Systems GmbH

- Komplette Druckauftrag
- Container
  - Data
  - Templates
  - Blocks
  - Attributes
- Serialisierbar XML

Runtime PrintJob

PSI Systems GmbH

```
<?xml version='1.0' encoding='UTF-8'?>
<printjob>
    <data>
        <testdata>
            <contract>
                <applicant1>
                    <city>Cupertino</city>
                    <firstname>Steve</firstname>
                    <name>Jobs</name>
                    <street> 1 Infinite Loop</street>
                    <zipcode>CA 95014</zipcode>
                </applicant1>
            </contract>
        </testdata>
    </data>
    <templates>
        <template>
            <url>file:/Users/stefanpudig/Documents/dev/projects/psisystems/d-machinery/dmachinery-impl/target/test-classes/de/psisystems
            /dmachinery/template/samples/herbstcampustest/repo/TEMPLATE/de_DE/COMMON/MASTER/0.1/master.xslfo
            </url>
            <attributes />
        </template>
    </templates>
    <blocks xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
        <block id="ADDRESS" version="0.1">
        </block>
        <block id="LOGO" version="0.1">logo.jpg</block>
        <block id="SENDER" version="0.1">PSI Systems &#xb7; Zur Kunn 23 &#xb7;
            54657 Badem</block>
    </blocks>
    <attributes>
        <UUID>52f7158f-0a63-4c9e-9eba-d2a19d8eb1f7</UUID>
    </attributes>
</printjob>
```

Runtime PrintTask

PSI Systems GmbH

- Execute PrintJob
- Ermittelt PrintAssembler<OutputFormat>
- Ermittelt PrintEngine<InputFormat><OutputFormat>
- Buildin SimplePrintTask (SingleThreaded)

Runtime PrintAssembler

PSI Systems GmbH

- OutputFormat spezifisch
- verklebt Einzeldokumente
- fügt Metadaten ein
  - Seitenweise
  - Gesamtdokument
- Encryption, Rechte …
- Seitenummern, Wasserzeichen …

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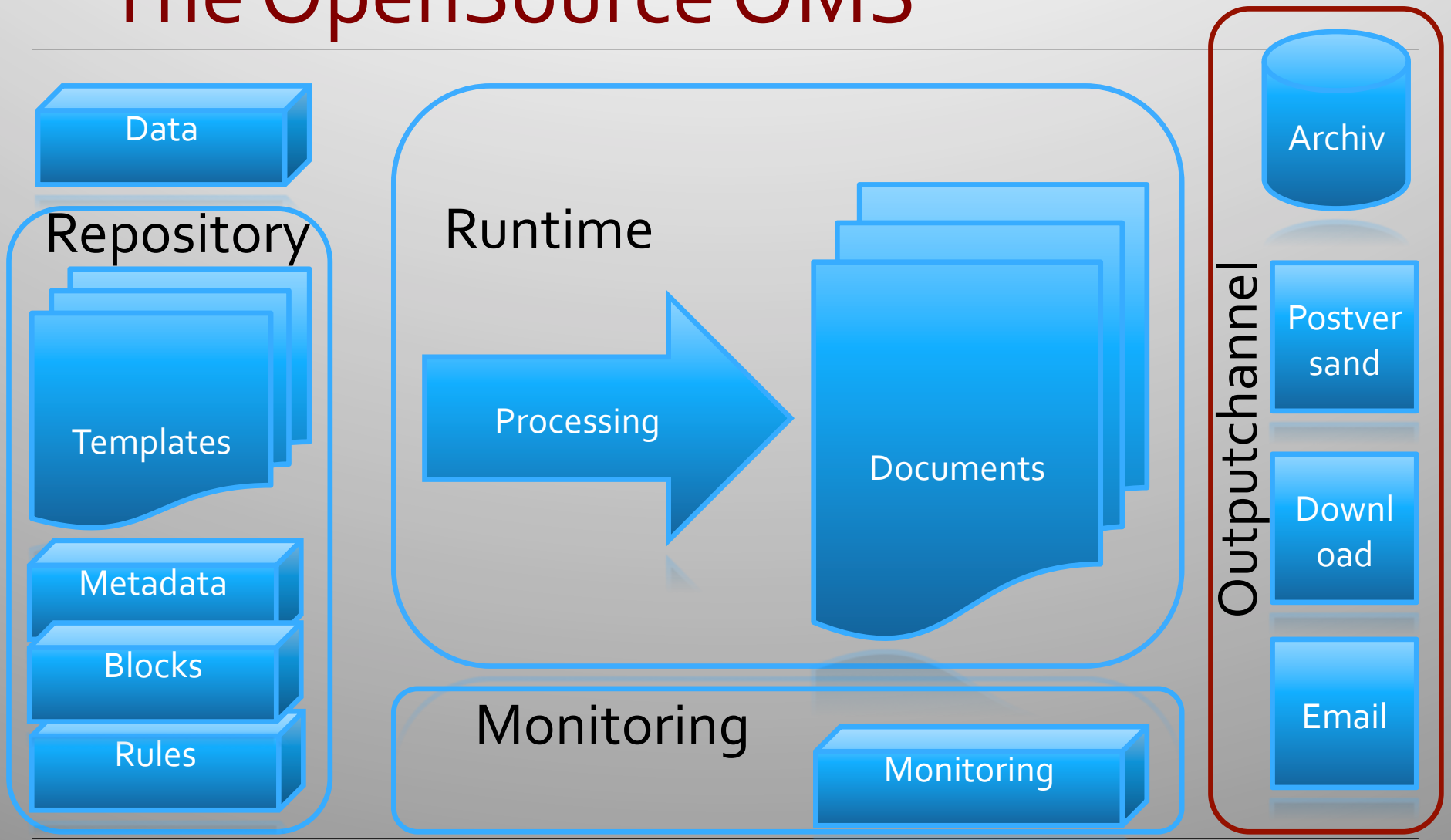
PSI Systems GmbH



OutputChannel

PSI Systems GmbH

- Lifecycle
- Start
- End
- Liefert Outputstream
- Buildin StreamOutputChannel
- Geplant
  - DispatchByMailOutputChannel
  - MailOutputChannel

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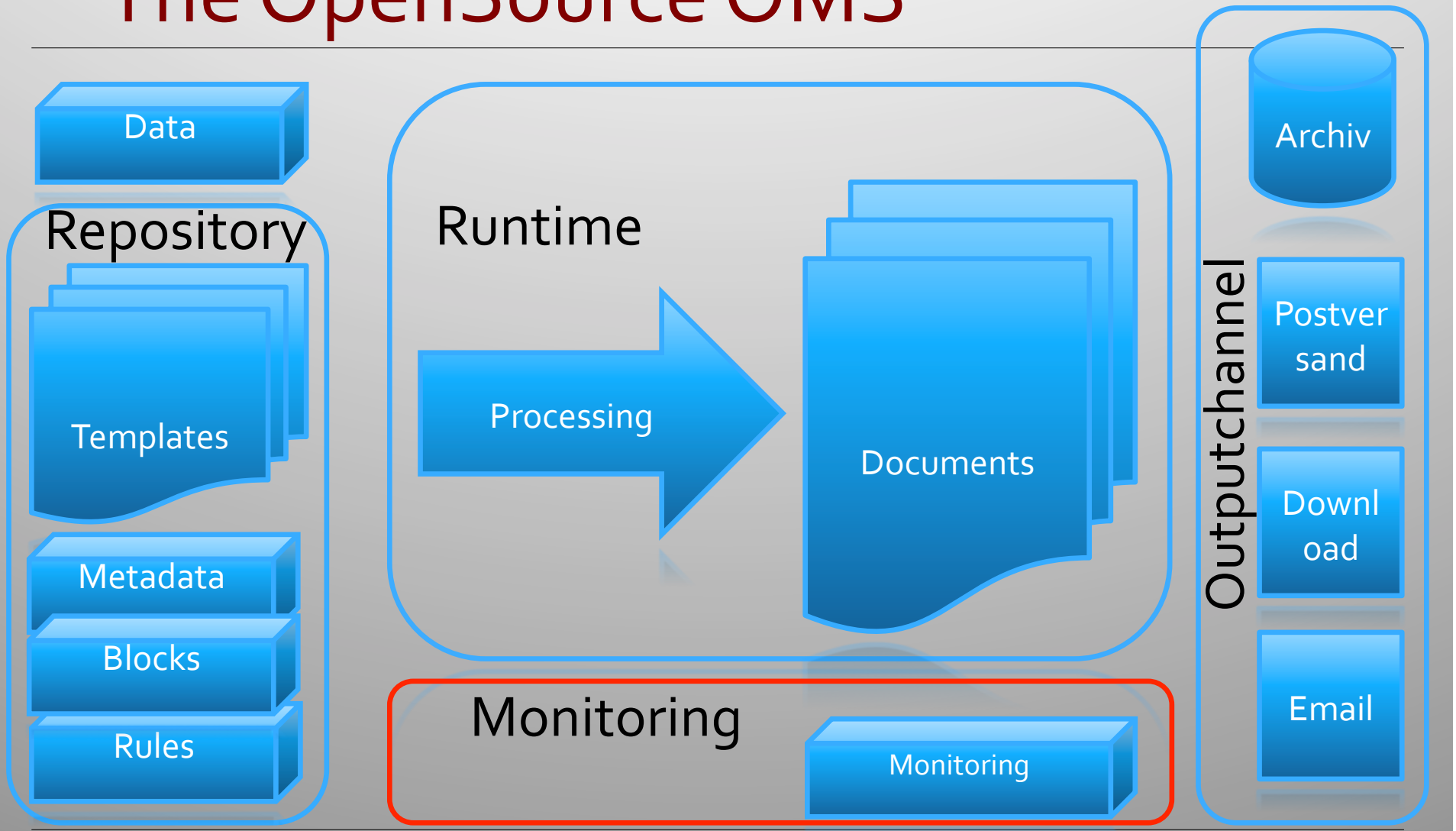

Monitoring

PSI Systems GmbH

- Dokumenterzeugung
  - Java Listener
- Dokumenttracking
  - Einbetten von Metadaten ins Dokument
  - Extensible Metadata Platform
  - iText XMPWriter
  - Adobe XMP Toolkit

Monitoring Metadaten im PDF

PSI Systems GmbH

```
%PDF-1.4
%
....

2 0 obj<</Parent 10 0 R/Type/Page/Contents 3 0 R/Resources
        /d-machinery<</SRC(HERBSTCAMPUS)/Type/d-machinery/DUPLEX(TRUE)/PAPER(PLAIN)>>>>
endobj

...

<?xpacket begin="" id="W5M0MpCehiHzreSzNTczkc9d"?>
<x:xmpmeta xmlns:x="adobe:ns:meta/">
    <rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#">
        <rdf:Description rdf:about=""
            xmlns:dc="http://purl.org/dc/elements/1.1/">
            <dc:format>application/pdf</dc:format>
            <dc:subject>
                <rdf:Bag>
                    <rdf:li>ZIP=CA 95014</rdf:li>
                    <rdf:li>CITY=Cupertino</rdf:li>
                    <rdf:li>BEILAGEN=RueckumschlagA6, Tankgutschein</rdf:li>
                    <rdf:li>NAME=Steve Jobs</rdf:li>
                    <rdf:li>STREET=1 Infinite Loop</rdf:li>
                    <rdf:li>UUID=98722e1b-9861-478f-a00f-a62d56f29546</rdf:li>
                </rdf:Bag>
            </dc:subject>
        </rdf:Description>
        <rdf:Description rdf:about=""
            xmlns:pdf="http://ns.adobe.com/pdf/1.3/">
            <pdf:PDFVersion>1.4</pdf:PDFVersion>
            <pdf:Producer>iText 2.1.0 (by lowagie.com)</pdf:Producer>
            <pdf:Keywords>Hello World, XMP, Metadata</pdf:Keywords>
        </rdf:Description>
```

Wie geht's weiter?

PSI Systems GmbH

- Herbst 2009
  - Release D-Machinery 2.0
  - www.d-machninery.org
  - Apache License
- Frühjahr 2010
  - Openoffice als Designer
  - XMLFilter nach XSLFO
    - Templates
    - Blöcke
  - Drag n Drop Data XML
  - Repository Editor
  - Ruleeditor

Fragen ???

PSI Systems GmbH

Vielen Dank für Ihre Aufmerksamkeit!

PSI Systems GmbH

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PSI-Systems GmbH

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