Do's & don’ts @DICTU

Program
Case Management

OpenShift, PEGA, EDB and Alfresco
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1. Introduction Dutch Government

- Cloud Computing (digital video)
- DICTU (Ministry of Economic Affairs)
- Data Center North (digital video)
Introduction: WWW.DICTU.NL
- organization -
Introduction: **WWW.DICTU.NL**
- facts and numbers -

- DICTU is IT Shared service organisation
- Part of the Ministry of Economic Affairs
- 1500 applications, of which 830 bespoke business applications;
- Data connections in the Netherlands to about 210 locations;
- Twin data centres in Groningen;
- Over 3300 servers;
- 14,000 workplaces and 13,000 mobile devices;
- As income tax service, DICTU has a turnover of 200 million euros;
- DICTU employs over 1200 people.
Introduction: [WWW.DICTU.NL](http://WWW.DICTU.NL) - strategy for the next 3 years -

- **Who** - DICTU works only for the Dutch government
- **What** - DICTU provides adequate service
- **How** - DICTU is reliable and agile

*DICIT wants to deliver added value through:*

- *customer focus*
- *reliable, cost-effective and innovative services*
2. Introduction Program Case Management

- Opportunities
- Standard Government solution
- Why using PegaSystems & Alfresco?
- Why using the OpenShift Container Platform?
- People who can
Opportunities for small Government organizations

Ministry of Justice
Council for Criminal Justice and Youth Protection

- Software as a Service (SaaS)
- Platform as a Service (PaaS)
- Maintenance contracts for 5 years
- Pay per User model

Ministry of Economic Affairs
Inspection telecom frequencies

Ministry of Public Health, Welfare and Sport
Health Inspection

- 230 Government Inspections
- 100 and 1000 Employees
- 150,000 Government Users
- Revenue 300 million euro’s - maintenance
- Revenue 300 million euro’s - Digital Innovation
Our Standard Government Solution
The USPs for Government organizations are

- Business in the lead
- Reusable business processes
- Security (government requirements)
- Affordable (pay per user)
- Agile (approach)
- Scalable (Horizontal & Vertical)
- Simple (no tender needed)
- Fast (short time to market)
- Any time, any place, any where and any device
- Not for Profit
The DICTU Approach for new Customers
Consists of four phases

Phase I
Startup
- Kick-off
- Requirements
- Processes (IST/SOLL)
- Architecture IST/SOLL
- Employees and Organization
- Readiness check
- PAAS solution
- Business case
- Go/ No Go
- Project plan Phase II
4 - 8 weeks

Phase II
Initiaton
- Proof of Value (POV)
- Pricing (phase III, IV)
- Project plan (phase II, IV)
- Go/ No Go Phase III
- Realization
- Kick-off
- Requirements
- Processes (IST/SOLL)
- Architecture IST/SOLL
- Employees and Organization
- Readiness check
- PAAS solution
- Business case
- Go/ No Go
- Project plan Phase II
4 weeks

Phase III
Realization
- Agile
- DCO
- Development
- Test
- Implementation
- Agile
- DCO
- Development
- Test
- Implementation
X months

Phase IV
Maintenance
- Changes
- Maintenance
- Service management
- Account management
- Changes
- Maintenance
- Service management
- Account management
5 years

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Why using PEGA & Alfresco?
Casemanagement, BPM, Management information en CRM solution

“Pegasystems has the best ability to model and predict a customer's behavior, and to deliver the next action to the agent.”

*Magic Quadrant for the CRM Customer Engagement Center, 2015*
PEGA references in the public sector

PEGA Nederland
Voornamelijk actief in Private sector en voor EZ in publieke sector
Why using Red Hat Open Shift Container Platform?

<table>
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<tr>
<th>Requirements</th>
<th>Components</th>
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| Scalability (vertical en horizontal)      | Virtualisation infrastructure  
|                                           | Containerisation and redundant configuration of Pega, Alfresco en PostgreSQL |
| Performance                               | Continuous Delivery: performance testing  
|                                           | Monitoring: End user monitoring and resource monitoring  
|                                           | Containerisation: deployment application- and database nodes. Efficient resource usage |
| Availability 7x24                         | Containerisation with redundant configuration of Pega, Alfresco en PostgreSQL |
| Continuous Integration (incl. automated testing) | Pega: Pega 7.3 (when available)  
|                                           | Continuous Delivery: Tosca/Selenium, Jenkins, GitLab, Nexus, ... |
| Capable to run multiple parallel test processes | Containerisation and maintenance: automated deployment of environments  
|                                           | Continuous Deployment: automated deployment of application instance and testing environment |
| Continuous Deployment                     | Continuous Deployment: Automated deployment |
| Configuratiemanagement                   | Continuous Delivery: GitLab, Nexus. Management of containers, application functionality, configuration files, testing functionality. |
| Multi-tenant PaaS model                   | Containerisation: management of a big number of servers and components, extensive resource pooling, division of tenants via routing |
| Data integrity in case of incidents and recovery | PostgreSQL: standard quadruple installation  
|                                           | Infrastructure: storage with geo distribution |
3. Development product “ZGW-Basisdienst”

- Multi tenant platform
- Iaas and PaaS
- Continuous Delivery
Multitenant platform
(Multidisciplinary team with product knowledge)
Multi-tenant (Low-level customer separation)
Infrastructuur as a Service

Government DC (ODC Noord)

DICTU
Network (security)

SSC IT
Network (Security)

Fysieke Hardware in Datacenter (Groningen)
Standard Solution v1.0
(Functionality)

- Case management
- Business Rules Management
- Process Management (WFM, ACM)
- Reporting
- Modelling
- Text Generation
- Presentation
- Integration
- Export (BIX)
- Metadata Integration
- Search function
- Preview documents
- Edit documents
- Document generation
- Office application
- BI/BA DataWareHouse
- Document Management
- Record Management
- Alfresco 5.2
- File and archive management
- Archivist

Citizens, Companies, Institutions

Employees

External portal ZGW dienst
- Authentication e-gov (standardised-Service)

Internal portal ZGW dienst
- User Management, Authorization, Authentication

Anonymous message

External services

Intranet

Gov

Internet

Intranet

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Releases

- Oplevering: Pull vanuit Klant team
- Release: Push vanuit Basisdienst ZGW
4. Demonstration
5. Lessons Learned (Management/process)

- Start small, step by step (Agile way)
- Facilitating leadership
- Focus on People Management
- Use **native language** within program for project staff
- Coaching on the job a top level DevOps team as a mixed team of professionals with **different individual qualities** (infra, network, Linux, DBA, OpenShift container platform, application management PegaSystems, Alfresco, CI/CD)
- Use experiences other project (for example Quattro at ODC/N)
- Pay close attention to documenting and sharing of knowledge
- Working together with implementation partners (Trivento, Red Hat)
5. Lessons Learned (Technical/Products)

- Every 2th same manual activity will be scripted in OpenShift
- Start small, take it step by step
  1. Step 1: Create single node cluster 64GB/8 cores expand with additional nodes, no shared storage, so every pod attach to a particular host (advantage is less overhead to additional repositories, and monitoring dashboards)
  2. Step 2: Development step by step Multi node cluster with **Cloud Native Storage** (CNS)
- Backups to other data centre
- Principle ‘Eating your own dog food’
- Use correct OpenShift license (final goal is also pay per use)
- Use SSO components (RH SSO (=Keycloak), Ldap) rolled out as part of the ZGW template
- Use native clustering with EDB-Enterprise Server Edition
- Use the complete OpenShift subscription (for example RHEL/SSO)
- Use quotas memory, storage, CPU (for example Java 8 processes)
6. Questions