



# Retargeting IT for Emerging Business Needs

Charles Finley  
Transformix Computer  
Corporation

## Who We Are

Transformix provides software solutions and services that include software migration tools, custom programming language translators and development tools that help automate the migration, transformation and enhancement of legacy software applications into modern environments.

Our skills include the use of older programming languages such as COBOL, PASCAL, FORTRAN, SPL, C, C++, etc. as well as new languages including JAVA, C#, Python/Jython, JavaScript, Groovy, etc. Our RDBMS (Oracle, IBM DB2, Microsoft SQL Server, Postgresql) centric approach includes the use of both commercially available off the shelf products (COTS) as well as open source products.

Target platforms include legacy-UX, AIX, Linux and Microsoft Windows Server.

Our services include technical support, consulting and training.

# Our message – Look at IT Needs as a Whole

## Migration and Developer Productivity Solutions



## IT Responsibilities

- Existing Applications
  - Maintenance
  - Enhancement
  - Operation
  - Training
- Emerging Applications
  - Cloud
  - Mobile
  - Social
  - Consumerization
  - Big Data
- IT infrastructure
  - Security
  - Hardware support
  - Software support
  - Operational reliability (backup, recovery, restart)

## Retargeting IT

- Applications and application development
  - Legacy
  - New
  - Outside web services
  - Common skills
  - Tools
- Modernization
  - Web 2.0
  - Mobile
  - (Unified development environment with IDE)
- IT infrastructure
  - Legacy integration
  - Cloud integration
  - Security

# Our message – Retarget IT to Meet All Needs

Migration and Developer Productivity Solutions



**Set of Tools that addresses current and future needs**

- Wavemaker
- Mulesoft
  - Cloudhub
  - Mule ESB

**Tools Provide the Best Way to Learn Newer Technology**

- Learning to use these tools means learning a plethora of new technology concepts and moved development capability into the future

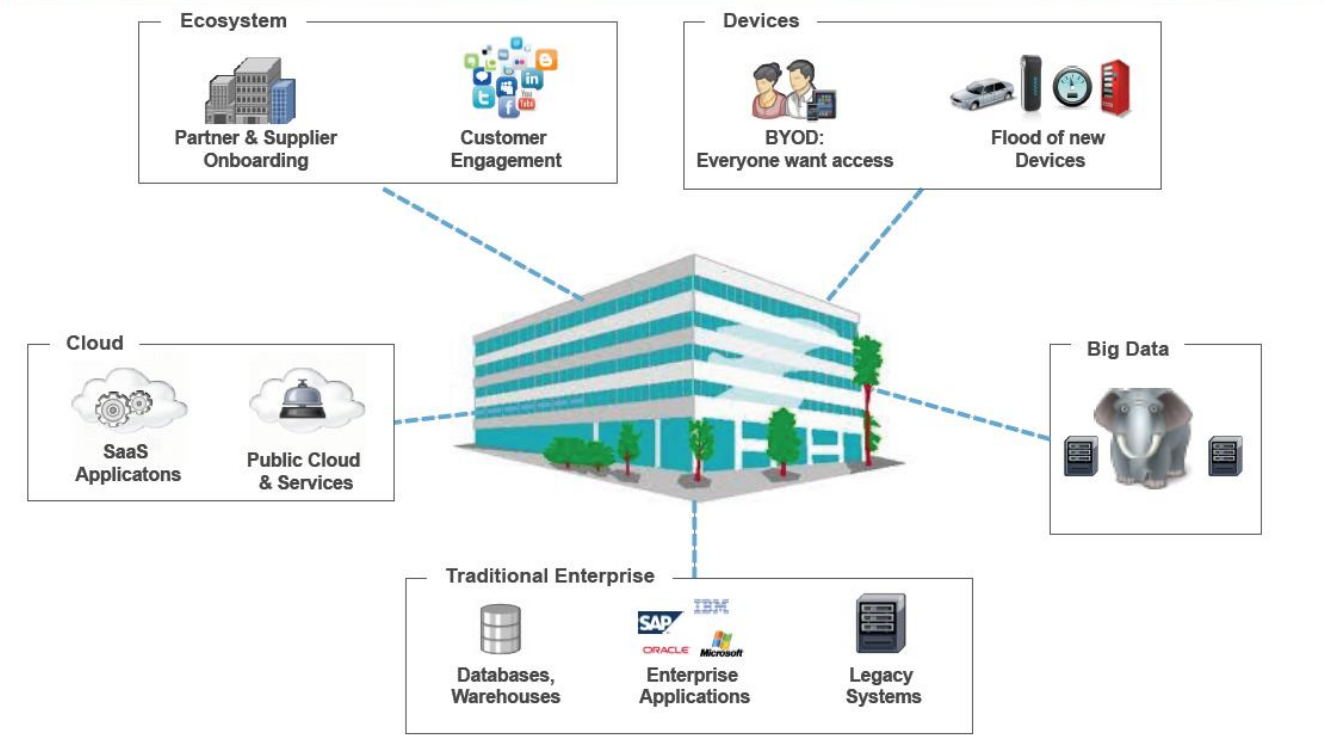
# We have this mess to deal with that includes legacy applications

Ohio IT Staff Augmentation Services Contract  
Skill Matrix

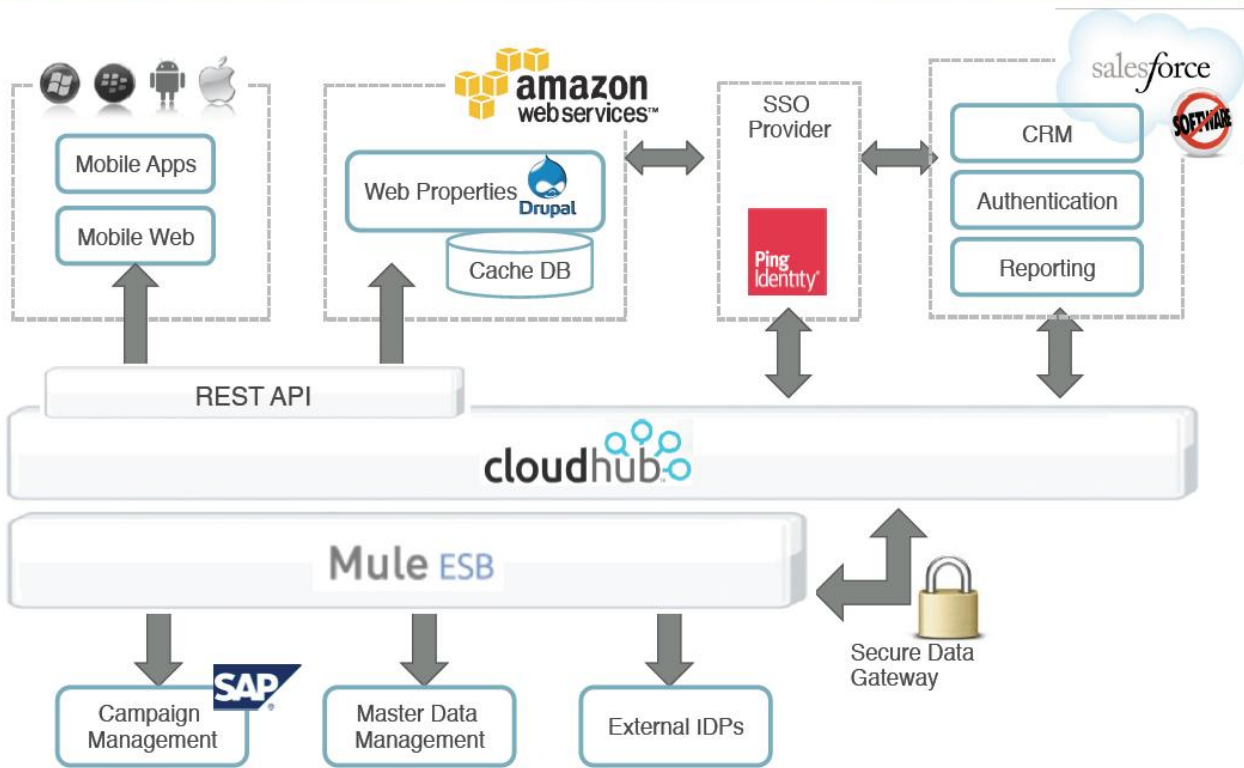
Legacy	Core	Emerging
Low Tech. Skills; Mature Technologies; High Labor Supply; Low Labor Demand	Mid Tech. Skills; Avg. Technology Maturity; Avg. Labor Supply; Avg. Labor Demand	High Tech. Skills; New Technologies; Low Labor Supply; High Labor Demand
Technologies/Skills		
4GL Programming with PL/SQL	Analytical and Technical Architecture (Business Process Mapping using UML, Enterprise Architect .NET Microsoft, and Enterprise Architect Sparxsystems)	Advanced Web Development, web 2.0 - Ajax (Ajax.Net and JQuery), HTML5, Silverlight, WPF (Jquery and HTML5 are not .Net specific)
Access	ArcView - Programmer	AIX - Administrator
Accessibility Standards (ACC Verify, MacroMedia, ITB 508)	ASP.Net, C#.Net, VB.Net	Applications Architecture
Adobe Acrobat	BizTalk - Administrator	ArcView - Architect
Altiris	Business Objects	Oracle 10gR3/Aqualogics - Portal Developer/Content Developer/Application Developer
AS/400	CA SiteMinder Suite	Biz Talk - Developer
ASP	Checkpoint Firewall	Embarcadero/Borland Delphi
BlackBerry	Cisco - Low-end Switch/Router	CA Identity Manager
C	Cisco PIX Firewall	Capacity Planning

- It's not just the legacy applications that are the problem
- IT must learn and master myriads of
  - programming languages and semantics
  - middleware interfaces
  - programming paradigms and styles
  - frameworks and libraries
- Interfacing to outside services
- Constantly emerging new technologies
  - Web
  - Mobile
  - Social media
  - Voice recognition

# The New Enterprise



# Hybrid cloud integration: global pharmaceutical

# Unified Development and Deployment Environment

## ▪ Rapid Application Development Framework

- ▶ GUI designer (Servoy Developer), is event-driven and runs scripts through JavaScript..

## ▪ User Interface

- ▶ Servoy allows applications to be deployed to both a native Smart client / Rich client and to a pure html Web client and on mobile devices from the same codebase and user interface definitions.

## ▪ Powerful IDE

- ▶ Smart editor, Code templates and snippets, Code completion
- ▶ SQL visualization, editing, validation
- ▶ References and declarations, Refactoring

## ▪ Integrated interactive Debugger

- ▶ State-of-the-art
- ▶ No compile necessary, just click and animate execution as you define the code!
- ▶ Full control, step, run, reposition, skip, change variables content, etc

## ▪ Application Deployment Framework

- ▶ Application Server to deploy the application; and Servoy Smart and Web Client which runs on the device—PC, mobile or other—of the end-user.
- ▶ Applications can be deployed on all popular operating systems including Mac OS X, Microsoft Windows, Linux, Solaris and other UNIX systems.

## ▪ Access to data from Popular SQL Back-ends

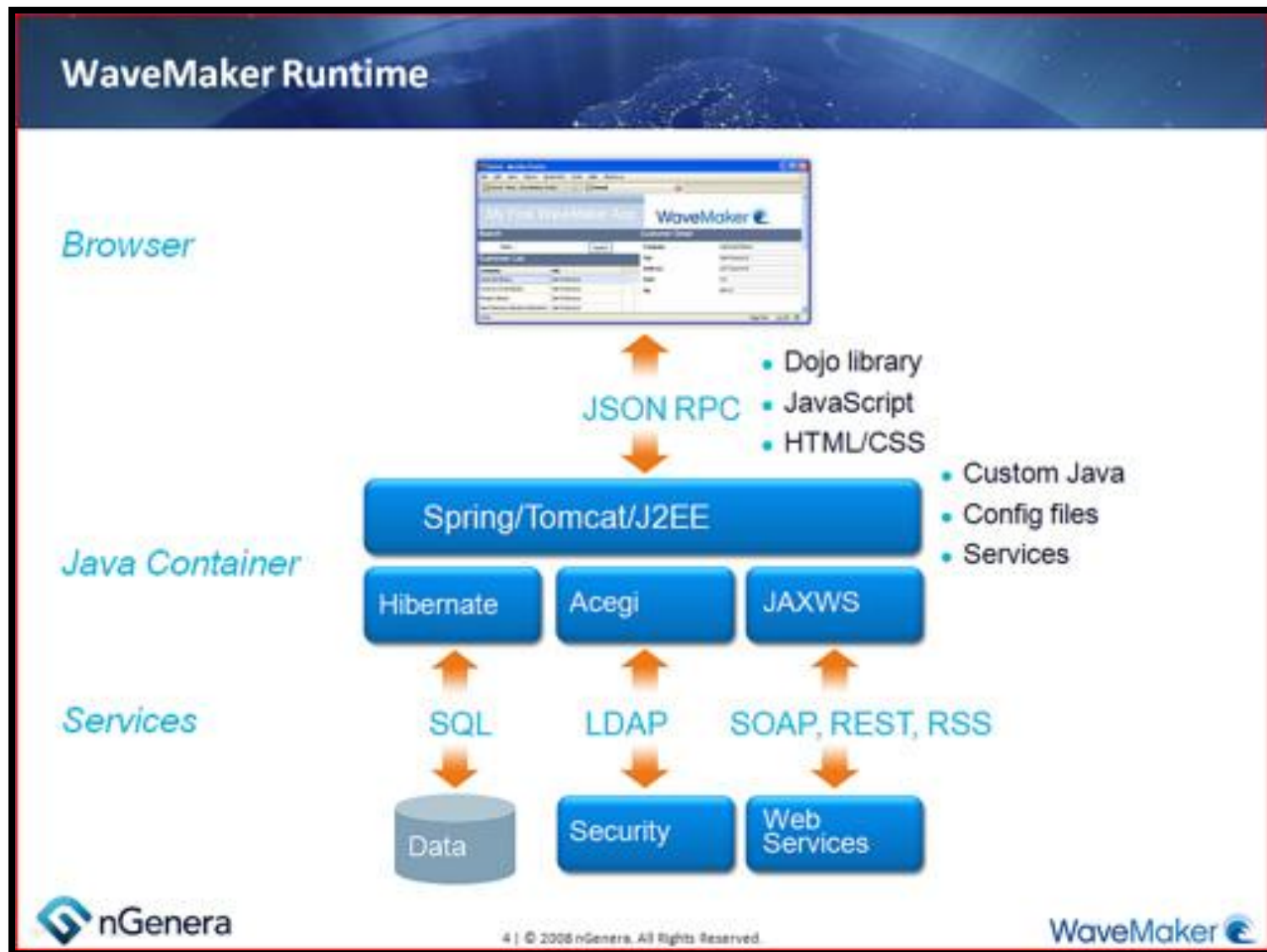
- ▶ Oracle, Microsoft SQL Server, IBM DB2, IBM Informix, Sybase, etc.

## ▪ Web Services

- ▶ Includes client facilities to consume web services
- ▶ Includes plugins to provide web services



# WaveMaker Runtime Architecture



## Client

- WaveMaker Visual Ajax Studio: An intuitive, browser-based, WYSIWYG visual builder for rapidly assembling web applications.
- One-Click Widget & Template Publishing: Turns any WaveMaker page into a widget or template for reuse in projects.
- Enterprise-Ready Data Widgets: Pre-built templates & Ajax components assist in building a rich user interface in any browser without writing code.
- Live Forms: Create CRUD database forms with a single click.
- Live Layout: Preview live data within the Studio.
- And more...Charting Widgets, Diagnostics, Context-sensitive Help, Type Validation Flags, Resource Manager...

## Server

- Java Services: Integrate existing Java code.
- • Web Services: Connect with web services created using WSDL, REST or RSS
- Databases: Connect to almost any relational data source and import schema.
- Security: Use LDAP, database security, rolebased access controls and single-sign on solutions.
- Flexible Deployment: WaveMaker Studio creates standard WAR files that can be deployed to any JDK 1.5+ Java Server.
- One-click Cloud Deployment: Applications built in WaveMaker Studio can deploy directly to EC2.
- RightScale Integration: For multi-server deployments, WaveMaker integrates with RightScale's cloud management platform.

# Key Development Tools to Retarget IT

- **Applications and application development**
  - Wavemaker Development Tools
- IT infrastructure
  - Mulesoft Cloudhub
  - Mulesoft ESB
- Modernization
  - Web 2.0
  - Mobile
  - (Unified development environment with IDE)
  - Provided through
    - Mulesoft Studio
    - Wevemaker studio
    - Transformix tools

## Wavemaker Specifications (example of what you can learn indirectly)

### Integrates:

- Spring, Hibernate, JAXWS, ACEGI, Dojo, Sun JDK

### Supports:

- POJOs, JOSSO, Java, JavaScript, CSS, HTML, WSDL, WADL, LDAP, ActiveDirectory (LDAP & ActiveDirectory only in Enterprise Edition)

### Deploys to:

- Local or remote java application servers, Amazon, RightScale

### Browsers:

- Firefox 2+, Internet Explorer 6+, Safari 3.1+ or Chrome

### Operating Systems:

- Windows XP/Vista/Server 2003, Mac OS X 10.5+,
- Red Hat Enterprise Linux 5, CentOS, Debian, Ubuntu

### Databases:

- Postgres, MySQL, Oracle, Microsoft SQL Server 2005, IBM DB2 (Only Postgres & MySQL in Community Edition)

### Servers:

- Tomcat, JBoss, WebLogic, WebSphere, GlassFish

### Minimum Required:

- **Development:**
  - Firefox 2+, Internet Explorer 7+, Safari 3.1+ or Chrome
  - 1024 x 768 Screen Resolution
- **Deployment:**
  - JDK 1.5+ Java Application Server

# Summary and Conclusions

- ❖ In order to really be in charge of IT, management needs to be free to pick the best application for the job and to choose the best developers for the task
- ❖ Applications can be legacy applications, COTS packages, services provided by cloud hosting companies, etc.
- ❖ Retargeting IT development tools provide the opportunity to save the organization time and money overall.
- ❖ Cloud-centric Unified Development of Legacy and Modern Applications simplify the IT development environment
- ❖ Tools are needed to glue development tools intended for use in new development for use in legacy development
- ❖ An modernization approach for legacy applications mitigates most if not all of the challenges facing IT management for legacy applications

## For More Information

Homepage: <http://modernization.xformix.com>

Contact: Charles Finley  
(619) 795-0720  
email: [cfinley@xformix.com](mailto:cfinley@xformix.com)