NORTHUMBRIAN WATER LIMITED

“ADF Mobile was the perfect solution for our requirement of providing Oracle E-Business Suite functionality to our senior managers on their iPhones. With ADF Mobile we were able to develop our application within a short period of time and with a small budget.” – Ana Nicholson, Applications Architect, Northumbrian Water.

Executive Summary
Northumbrian Water Limited serves a population of 2.7 million people in the North East of England with water and wastewater services and a further 1.8 million people in the south east of England where it provides water services trading as Essex & Suffolk Water. The company operates and maintains 17,000 km of water mains and a 30,000km sewer network in the North East of England, with a further 8,500 km of water mains in the Essex and Suffolk areas.

Northumbrian Water must react quickly to incidents which often require purchase of goods. To expedite this process, senior managers should be able to approve EBS iProcurement requisitions anytime, anywhere. The new mobile application allows them to access their EBS approval requests through iOS devices in a simple and efficient manner. Originally developed as a pilot implementation to demonstrate a potential solution, the water company went into production mobilizing their EBS iProcurement application, facilitating approval of requisitions by their senior managers anywhere, using Oracle ADF Mobile.

Organization
The intended users of this application were senior managers with mobile devices and access to their EBS iProcurement application. They are able to review their outstanding requisitions including details along with workflow approval history and of course have the ability to approve requisition requests from their workforce.

Solution & Results
Northumbrian Water had a very specific plan for the information they wanted to make available to their senior managers and a well thought-out design on how to deliver their solution. In collaboration with Oracle Consulting, their application pilot became a production system through the use of Oracle ADF Mobile to front their EBS iProcurement application.

The first part of the application development process required the identification of the EBS Database PL/SQL objects that would need to be accessed via the EBS integration repository. Next, SOAP based Web Services were developed using Oracle SOA Suite 11g and Oracle Apps Adapter to expose the PL/SQL objects as Web Services. The final piece of the solution leveraged ADF Mobile to build the mobile application. ADF Mobile consumes data from Web Services via a web service data control (allowing for binding of components on the ADF Mobile AMX pages) and displays the content using an HTML5 native-like interface.

Navigation within the water company’s application works through ADF taskflows. Security is handled through Java Authentication and Authorization Service (JAAS) into EBS and through Oracle SOA Suite. Deployment of the application is handled through the use of MobileIron allowing Northumbrian Water to deliver their mobile applications through their own App Store.

Benefiting from the rapid application development provided by ADF Mobile, the water company’s mobile solution was delivered in a short timeframe of 8 weeks.

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Functionality provided by this application includes:
- Review of outstanding requisitions
- Ability to review the details of requisitions
- A View into the historical approval chain
- Ability to approve requisitions
- Ability to view policies and procedures

**Business Value**
Northumbrian Water’s ADF Mobile solution provides for quick and secure access into their EBS iProcurement application allowing their senior managers to react quickly to requests from their workforce, becoming more efficient in their day-to-day activities.

Benefits include:
- Access to EBS iProcurement anytime/anywhere via their mobile solution.
- Low cost of development in a very short timeframe.
- While leveraging iOS only at this point, this solution may be easily deployed to Android devices as well.

**Solution Architecture**
EBS iProcurement content is exposed via SOA Suite SOAP based Web Services to ADF Mobile native application for iOS through Web Service Data Controls.
Security Architecture
Authentication and Authorization is managed through JAAS.

ADF Mobile

Oracle SOA

JAAS Authentication

Apps Adapter

Fusion Middleware
Oracle AS, WebLogic

Oracle E-Business Suite
Application View

From left to right the application views below are application Authentication, Purchase Requisition, Requisition details with ability to Approve or Reject, and the Requisition Line details.
From left to right the application views below are final Requisition Approval / Rejection with Comment, Approval Status, Policy Details, and Logout of Application.