Kansas Truck Routing & Intelligent Permitting system

March 7, 2012 Brown Bag Presentation
Wally Ballou, KDOT – John Culbertson, KDOT
KANSAS AT A GLANCE

- 105 counties, 627 cities
- 140,753 miles of public roads
- Land Area (sq. Miles) 81,823
- Population (2010) 2,853,118
- Total Bridges 25,487
## Comparison of Public Roads & Population

<table>
<thead>
<tr>
<th>State</th>
<th>Ranking</th>
<th>Miles</th>
<th>Land Area</th>
<th>Population</th>
<th>People Per Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas</td>
<td>1</td>
<td>310,850</td>
<td>261,226</td>
<td>25,145,561</td>
<td>81</td>
</tr>
<tr>
<td>California</td>
<td>2</td>
<td>171,874</td>
<td>155,766</td>
<td>37,253,956</td>
<td>216</td>
</tr>
<tr>
<td>Kansas</td>
<td>3</td>
<td>*140,753</td>
<td>**81,823</td>
<td>2,853,118</td>
<td>20</td>
</tr>
<tr>
<td>Illinois</td>
<td>4</td>
<td>139,577</td>
<td>55,518</td>
<td>12,830,632</td>
<td>92</td>
</tr>
</tbody>
</table>

Source - 2009 Highway Statistics, 2010 Census Estimates

*This includes roads under the jurisdiction of KDOT, KTA and Kansas cities and counties. About 100,000 miles of Kansas roads are non-paved.

**Kansas ranks #15 in land area
K-TRIPS

Kansas Trucking Intelligent Permitting System
Meeting objectives

• Project Background
• Project Team Structure
• Approach to Requirements Gathering
• Current Deployment Status
• Demonstration
• Next Steps
• Q & A
Objectives of K-TRIPS

- Improve truck permit application
- Automated Routing
- Payment
- Efficiency for state agencies and customers.
Project Background
Current System

Current Kansas Permitting Business Context Interfaces

- Web-Based Permit
- COMMDATA
- Kansas State Treasurer
- VitalChek

Payment
- Issued Permits
- Payment Reconciliation

Permit Remittances
- Issued Permits

KTC

- Permit Application
- Issued Permits
- Payment Reconciliation

KHP

- Permit Application
- Issued Permits
- Payment Reconciliation

KDOT BEU

- Permit Application
- Issued Permits
- Superload Application

KDOT

- District 1 Coordinator

District 1

- District 2
- District 3
- District 4
- District 5
- District 6

Completed Large Structure Application

Superload Analysis

Fax Permit Application

Walk-in, Phone Fax

Permit Verification

KHP Enforcement

Office of the Governor
Office of Information Technology Services

AD ASTRA NASPRA
Project background

• 31 Unique Types of Permits
Project Background

System Objectives

Enhance Customer Service

Protect Infrastructure

Promote Safety

Ensure Compliance
Project Background

Growing Demand

>100,000 Permits Annually

![Graph showing Superloads from 2004 to 2008 with a significant increase in 2008.]

Dated Technology

![Image of dated technology setup with a bridge over a river and a truck on the road.]

Key Issues

Changing Load Characteristics

![Image of changing load characteristics with a large wind turbine and a large tractor.]
Project Goals

Modernize / Upgrade System Capabilities

- Web-Based Interface
- Payment Options
- Querying / Reporting
- Enhanced System Interfaces
- Public-Facing Features

Automated Routing

- GIS-Based
- Suggested / Alternatives
- Infrastructure Constraints
- Incidents / Restrictions
- Data Quality / Timeliness

Integrated Agency Platform

- Reporting
- Audit
- Financial

Office of the Governor
Office of Information Technology Services
Kansas Truck Routing & Intelligent Permitting System (K-TRIPS) Concept of Operations

K-TRIPS Concept of Operations

<table>
<thead>
<tr>
<th>Step #</th>
<th>Description</th>
<th>Reqmts. Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>A Carrier or Permit holder sets up an electronic account with the K-TRIPS system. The</td>
<td></td>
</tr>
<tr>
<td></td>
<td>process includes entering the account holder's TIN and ensuring a valid account.</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>A carrier or agent does not have a current account holder, the carrier must establish a new</td>
<td></td>
</tr>
<tr>
<td></td>
<td>escrow account (TIN) and may include establishing accounts will include a new escrow account</td>
<td></td>
</tr>
<tr>
<td></td>
<td>either type of account holder, the carrier must set up an electronic account.</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Multiple user IDs can be associated with a single carrier or permit set up an application.</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>Prior to creating an account, the user is in good standing and is good standing with K-TRIPS.</td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>Authorized KTC staff manages accounts by creating, editing, deleting, flagging, suspending</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and reactivating them.</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>Once an account is created, the user can change his password and other personal information,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>such as contact information.</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>KTC Creates a Kansas Staff Account</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>An authorized KTC staff member creates accounts for Kansas staff. The accounts may have</td>
<td></td>
</tr>
<tr>
<td></td>
<td>different roles based on job definitions. When the account is created, the KTC staff will</td>
<td></td>
</tr>
<tr>
<td></td>
<td>be able to define the roles for the account. Different roles will be established to give</td>
<td></td>
</tr>
<tr>
<td></td>
<td>different staff access to different functionality, such as system administration, system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>management, customer service, report generation and accounting.</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Authorized KTC staff can manage accounts by creating, editing, deleting, suspending and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>reactivating them.</td>
<td></td>
</tr>
</tbody>
</table>
Enhancing Safety & Improving Efficiency 23

Project Phasing Overview

**Phase 1**

- ✔ Commission a Core Project Team
- ✔ Develop System Requirements
- ✔ Complete Feasibility Study Report
- ✔ Develop Scope of Work

**Phase 2**

- ✔ RFI / RFP
- ✔ Evaluate & Award
- ✔ Kick-Off Process

**Phase 3**

- ✔ Design
  - **Build**
  - Deploy
  - Maintain
Approach to Phase 1

1. Development of a Solid Set of System Requirements
   A. Focus on Users (Customers) & Administrators
   B. Comprehensive & Complete
   C. Include Enterprise Architecture
   D. Development of Procurement Strategy

2. Create Feasibility Study Report

3. Leverage Kansas Assets
   A. One-Stop-Shop History
   B. Team Cohesiveness & History
   C. Institutional Structure (KTC)
   D. Existing System Infrastructure (KGATE, KS511, CVIEW, Others)
   E. Motor Carrier Support
   F. Management Support
Project Risks

**Technical Risk**
- 30 Unique Varieties of Permits
- Quality of Back-End Data
- Multiple Legacy System Interfaces

**Institutional Risk**
- Multiple Agency Sponsors
- Legislative Mandates
- Budget

**Deployment Risk**
- Bugs / Crashes
- Agency Training
- Carrier Training / Usage

**Contracting Risk**
- Non-Qualified
- Under-Performance

**Procurement Cycle Planning**
- Thoughtful RFP
- Adequate Response Time
- Vetting of Vendors

**Clear, Comprehensive System Specifications**

**Very Low!**

**Rigorous Project Management Plan**
- Payment-Based Testing Plans
- Training & Documentation

**Kansas**

Office of the Governor
Office of Information Technology Services
NEW SYSTEM HIGHLIGHTS

Web-Based System

24/7 Accessibility

Account Management

Queue Management

Permitting Services

Process

Pay

Issue

Interactive Help (Online Chat Help)

Electronic Issue

Self-Issue Permits

Payment Options

Reporting

Apply

Office of the Governor
Office of Information Technology Services
# REVIEW OF FINAL REQUIREMENTS DOCUMENT

<table>
<thead>
<tr>
<th>Ref #</th>
<th>Requirement</th>
<th>Description</th>
<th>M/F</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR01</td>
<td>Backup/Restore</td>
<td>Backup shall occur on a nightly schedule. Backup data shall be able to be restored within 24 hours of solution availability. DB logs shall be copied more often. Backups shall be able to be taken on demand.</td>
<td>M</td>
<td>KTC</td>
</tr>
<tr>
<td>DR02</td>
<td>Purge, Backup, and Restore</td>
<td>The solution shall provide the ability to purge, backup, and restore information for specified time frames.</td>
<td>M</td>
<td>KTC</td>
</tr>
<tr>
<td>DR03</td>
<td>Archiving and Purging</td>
<td>The solution shall provide the ability to archive information for any specified time frame.</td>
<td>M</td>
<td>KTC</td>
</tr>
<tr>
<td>DR04</td>
<td>Backup Scheduling</td>
<td>The disaster recovery approach and scheduling shall minimize the impact from the loss of processing capabilities and provide for the recovery of mission critical applications.</td>
<td>M</td>
<td>KTC</td>
</tr>
<tr>
<td>DR05</td>
<td>Operations Restore</td>
<td>The disaster recovery approach and scheduling shall minimize the impact from the loss of processing capabilities and provide for the recovery of mission critical applications.</td>
<td>M</td>
<td>KTC</td>
</tr>
</tbody>
</table>

**Legend:**
- **M** = Mandatory: This requirement is mandatory and must be implemented as described.
- **M/F** = Mandatory / Flexible: The requirement is mandatory, however the way that it is implemented with the new system is flexible.
- **O** = Optional: The requirement is "nice to have", but is optional.
Procurement & Award

REQUEST FOR PROPOSAL RELEASED TO VENDOR COMMUNITY
THREE QUALIFIED PROPOSALS
THREE INTERVIEWS

AWARD MADE TO:
ProMiles Software Development Corporation
Bridge City, Texas
Project Status

Project Execution Began 10-03-11

On-Schedule – On-Budget
Routing Demonstration

K-TRIPS
Questions & Thank-You

• June 20, 2013 HEEP Area V Presentation
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