



Management
Analysis
& Development

- **Minnesota Department of Labor and Industry and Minnesota Office of Enterprise Technology**
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Minnesota Enterprise e-Licensing System Evaluation

November 2011

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Management Analysis & Development

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Contents

| | |
|---|-----------|
| Executive Summary | 1 |
| Introduction | 2 |
| E-Licensing Background | 4 |
| Assessment of Current Situation..... | 7 |
| Conclusions and Recommendations..... | 15 |

Executive Summary

The Minnesota Enterprise e-Licensing System allows citizens to apply for and renew online their professional/occupational licenses and business/commercial licenses through a single entry point or gateway. The 2009 Legislature approved a license-fee surcharge to fully implement the \$35 million system across 21 licensing boards and seven state agencies that issue 670,000 licenses annually.

The commissioners of the Department of Labor and Industry and Office of Enterprise Technology hired Management Analysis & Development to determine how the e-Licensing System can best achieve its objectives within the original timeframe and budget, and offer alternatives based on this evaluation, if appropriate.

The e-Licensing System envisions the highest level of online-transaction sophistication and citizen convenience and cost savings through system consolidation. However, licensing entities are strongly opposed due to little opportunity to influence the scope, vision and direction; few perceived benefits; high project costs; negative impressions of the selected tool; and frustrating implementation experiences.

While the challenges are significant, the initiative is ready to leverage in-place software and hardware infrastructure, a stable funding source, project-team knowledge and experience, and configurable software that improves with each agency deployment. Management Analysis & Development recommends the following sequence of actions to develop a stakeholder-supported approach to achieving the initiative's intent of one-stop, online licensing for professional/occupational licenses and business/commercial licenses:

1. Create a common understanding about the current direction.

As the lead proponents, OET and the vendors should present their case to the e-Licensing Steering Committee on why the current plan is optimal for citizens, licensing entities, and the state. The goal is to ensure that all stakeholders have the same information about the initiative, key issues and concerns.

2. Confirm or revise the initiative's vision and objectives.

A common understanding will inform discussions about the current direction's value and potential revisions to the vision and objectives. Three key questions are: "What is the citizen-experience vision?", "What is the extent of the enterprise-wide effort in terms of participating agencies and technical components?" and "How can the initiative support statewide IT goals?"

3. Determine the best approach to achieving the vision.

Once the initiative's vision is confirmed or revised, the Steering Committee should define the management, operational, and technological criteria for evaluating the best approach for achieving the vision. E-licensing's current hardware and software infrastructure should be the primary technical candidate, but other solutions should be considered.

Introduction

The License Minnesota website, www.license.mn.gov, allows citizens to find information on nearly 600 business, professional, recreational, or vehicle licenses from 45 Minnesota state agencies and boards. The site describes each license's requirements, fees and application process, and links to a paper form or online application process.

The Minnesota Enterprise e-Licensing System extends License Minnesota's functionality to allow citizens to apply for and renew online their professional/occupational licenses and business/commercial licenses through a single entry point or gateway.

The 2007 Legislature appropriated \$7.5 million to develop the system's infrastructure and implement a pilot phase at two licensing boards. The 2009 Legislature approved a license-fee surcharge to fully implement the \$35 million system across multiple agencies and boards.¹ The Minnesota Office of Enterprise Technology (OET) manages the initiative, which involves 21 licensing boards and seven state agencies that issue 670,000 licenses annually.² Deloitte Consulting LLP and Iron Data LLC are assisting OET with system implementation.

Purpose

The Labor and Industry commissioner chairs the e-Licensing Steering Committee, whose members represent large state agencies and professional licensing boards implementing the system by June 2015 (Phase II). Pilot-project implementation and initial planning and development efforts at the departments of Human Services and Labor and Industry have raised concerns about state project management, greater-than-anticipated implementation costs, incremental value added and surcharge shortfalls.

The commissioners of the Department of Labor and Industry and Office of Enterprise Technology hired Management Analysis & Development, a separate state office, to:

- Identify stakeholder concerns and determine how the Minnesota Enterprise e-Licensing System can best achieve its objectives within the original timeframe and budget.
- Evaluate the likelihood of the project succeeding given its present status and path, and offer alternatives, if appropriate.
- Recommend where the Lean process could be applied.

¹ Minnesota iGov Report, November 18, 2009, page 40. Retrieved from http://mn.gov/oet/images/Minnesota_iGov_Report.pdf

² Minnesota Office of Enterprise Technology, *Phase II ELS-Master Rollout Plan (Modified Option B)*, June 21, 2010.

Method

This evaluation is largely based on group interviews and some individual interviews with 49 people representing e-Licensing's contractors, Deloitte Consulting LLP and Iron Data LLC, and these Minnesota departments and boards:³

- Board of Accountancy
- Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design
- Board of Barber Examiners
- Board of Behavioral Health and Therapy
- Board of Chiropractic Examiners
- Board of Cosmetologist Examiners
- Board of Dentistry
- Board of Marriage and Family Therapy
- Board of Medical Practice
- Board of Nursing
- Board of Nursing Home Administrators
- Board of Nutrition and Dietetics
- Board of Optometry
- Board of Pharmacy
- Board of Physical Therapy
- Board of Podiatric Medicine
- Board of Psychology
- Board of Social Work
- Board of Veterinary Medicine
- Department of Agriculture
- Department of Commerce
- Department of Education
- Department of Health
- Department of Human Services
- Department of Labor and Industry
- Emergency Medical Services Regulatory Board
- Office of Enterprise Technology
- Peace Officer Standards and Training Board

The Management Analysis consultant team also reviewed e-Licensing business case and project documents and was shown Iron Data's Versa software applications to understand the issues raised during interviews.

³ The Department of Public Safety's new steering team member was not interviewed because of little project involvement.

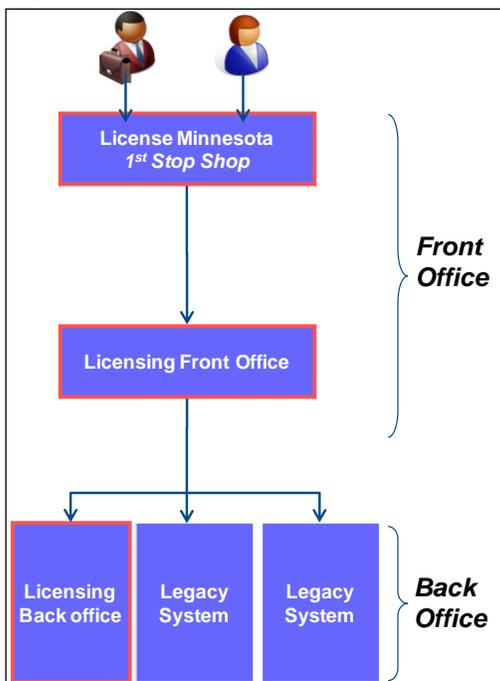
E-Licensing Background

The e-Licensing program is intended to be a “one-stop electronic licensing system” for state-issued professional, occupational or business licenses that offers:

- “Automated licensing processes [with] access 24 hours a day, every day.
- Faster processing and improved security.
- Reduced waste through the elimination of paper and transportation.
- Less-burdened internal operations through increased citizen self-service.
- Better reporting and business data analysis.”⁴

Per a 2005 executive order, the commissioner of Labor and Industry serves as project sponsor and works with the Minnesota Office of Technology (OET) to develop and manage a multi-year rollout plan.⁵ OET contracted with Deloitte Consulting LLP to implement e-Licensing under an agency or board-specific statement of work. Deloitte subcontracted with Iron Data LLC to provide the licensing software application.

Figure 1. E-Licensing system



Pilot projects at the Emergency Medical Services Regulatory Board and Peace Officer Standards and Training Board were completed in 2009 (Phase I). Phase II is implementing e-Licensing at the other licensing entities through fiscal year 2015.

When completed, citizens will locate their required licenses through the License Minnesota portal, which connects to a common licensing front office for license application, renewal and payment (Figure 1). This front office system exchanges data with each board and agency’s back-office licensing database. The project affects agencies differently based on their current system capabilities (Table 1).

Source: Office of Enterprise Technology, *Minnesota Electronic Licensing System Master Roll Out Plan Development*, PowerPoint presentation, September 2009.

⁴ State of Minnesota, *Drive to Excellence Summary Report 2010*, page 11, http://www.admin.state.mn.us/documents/reports/dte_summary.pdf.

⁵ The executive order and other e-Licensing documents are at <http://www.state.mn.us/portal/mn/jsp/content.do?subchannel=-536892923&programid=536906395&id=-536886806&agency=Excellence&sp2=y>.

Table 1. How e-Licensing affects licensing entities' current systems

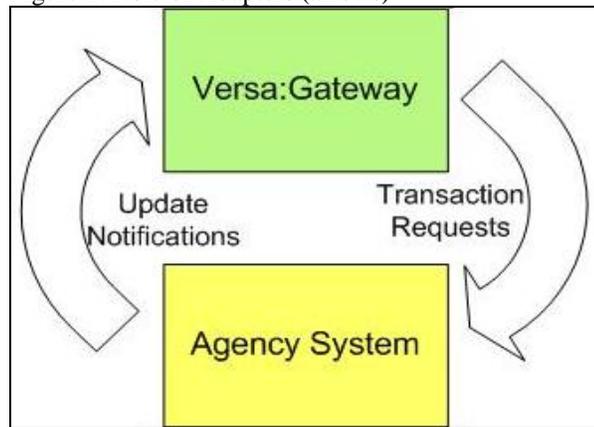
| Online now | Paper with functional back-office system | Paper with unsupported back-office system |
|---|--|---|
| Citizens apply online and the data is transmitted to the agency's back-office legacy system in real time. | Citizens mail a paper form to the agency, which manually enters it into the agency's back-office legacy system. | Citizens mail a paper form to the agency, which manually enters it into an unsupported back-office system. |
| After e-Licensing implementation | | |
| The new gateway replaces the agency's own online component and sends data directly to the agency's back-office legacy system in real time, as before. | The new gateway replaces the paper form and new adapters exchange data with the agency database, in real time or batch processing. | The new gateway replaces the paper form and automatically transmits the data directly to a new back-office system in real time. |
| Examples of affected agencies (current plan) | | |
| <ul style="list-style-type: none"> • Department of Agriculture • Department of Labor and Industry • Board of Nursing | <ul style="list-style-type: none"> • Department of Health • Department of Human Services | <ul style="list-style-type: none"> • Emergency Medical Services Regulatory Board • Peace Officer Standards and Training Board |

Source: first two rows adopted from Minnesota Office of Enterprise Technology, *Enterprise e-Licensing Information Packet*, March 11, 2010, page 8. "Examples of affected agencies" added by Management Analysis.

Key terms

- Front-office system: A Web application for applying for licenses online.
- Back-office system: An agency or board database that stores received online or paper applications and supports inspections, monitoring and other licensing-related functions.
- Adapter: Agencies with an existing back-office system but no Web capabilities must develop computer code to exchange data with a new front-office application (Figure 2). This data exchange keeps the new front-office database (Versa:Gateway) synchronized with the agency's back-office system for processing online licensing requests. The adapters are necessary because each system's data model and field names differ.

Figure 2: Role of Adapters (arrows)



Source: modified from Deloitte Consulting, *Electronic Licensing System – Department of Labor and Industry, e-Licensing Implementation Statement of Work*, September 16, 2010, page 43.

- Program: e-Licensing is an enterprise-wide initiative with an overall management approach, multi-agency rollout plan, and shared hardware and software infrastructure and technical support. The program has multiple projects: one for each participating entity.
- Project: An agency’s or board’s implementation of Versa:Gateway and/or Versa:Regulation.
- Surcharge: Minnesota Statutes 16E.22 requires licensing agencies and boards to collect a 10 percent surcharge on each business, commercial, professional, or occupational license, limited to \$150. The surcharge funds the Phase II e-Licensing program and expires on June 30, 2015.
- Versa:Gateway: Iron Data’s commercial front-office system being implemented by Minnesota’s e-Licensing program for all participating agencies and boards.
- Versa:Regulation: Iron Data’s commercial back-office system being implemented by Minnesota’s e-Licensing program for select boards.

Figure 3. E-Licensing timeline and milestones, 2005 to 1st quarter 2010

| | | |
|----------------|------------|---|
| 2005 | January | The Licensing, Regulation and Compliance Business Transformation Area Case for Change focused on improving the efficiency and effectiveness of the licensing process. Business Case found that approximately 40 state executive branch agencies currently conduct more than 11 million licensing-related transactions annually. |
| | April | Governor Pawlenty issued an Executive Order providing direction to state departments about establishing a "One-Stop Shop" for licensing. |
| 2007 | May | Governor and legislature fund the Minnesota Electronic Licensing System Project. |
| | October | State issues RFP to develop an end-to-end electronic licensing system for Minnesota. |
| 2008 | January | Steering Committee assembled and established monthly meetings with representatives from DOLI, DOA, DNR, POST, DPS, MPCA, MDA, OET, Commerce, EMS, DOF, MBN, DHS, DEED, MDH and AELSAGID. |
| | March | Project team kick-off to start implementation at pilot agencies. |
| | April/June | Design and Configuration and Conference Room pilots at POST and EMS. Demo for back-office (Regulation) solution. |
| | July | Milestone celebration event to commence second half of implementation for the pilot |
| | August | Demo event for potential customers on the front-end solution (Gateway). |
| | September | POST internal Go-Live of back-office solution (Regulation). |
| | October | Project Gateway and Portal Go-Live. |
| | November | Project Identity and Access Management Go-Live. |
| | December | e-Licensing featured at Minnesota IT Symposium. |
| | 2009 | January |
| January/ March | | Governor issues recommendations for Enterprise e-Licensing initiative for funding and fully implementing the system. |
| May | | EMS goes live and begins to serve citizens. The legislature approves and Governor signs into law the Enterprise e-Licensing initiative. |
| September | | Over 5,000 licensing transactions procured at POST and EMS |
| October | | Phase II rollout initiated with start-up of project at Department of Human Services (DHS). e-Licensing user group established. Master rollout plan development process started. |
| November | | Phase II Steering Committee established. |
| 2010 | January | DHS vision/planning stage completed. |
| | February | Over 10,000 transactions completed through the licensing gateway. |
| | March | Completion of the requirement gathering and design stage for the DHS. |

Source: Minnesota Office of Enterprise Technology, *Enterprise e-Licensing Information Packet*, March 11, 2010, page 7. Since March 2010, the DHS project is in the middle of deployment and DLI completed the design stage.

Assessment of Current Situation

This assessment establishes the context for discussing future options; it is not intended to assign blame. The assessment synthesizes participants' comments and Management Analysis consultants' impressions. Not all participants will agree with every point, though many interviewees hold similar sentiments about the challenges. Interviewees' detailed comments and organization-specific experiences were excluded to preserve anonymity.

Assets to Build On

The e-Licensing initiative has experienced a number of challenges and the work to date has been trying and difficult. However, vendor and state staff knowledge has increased tremendously and key hardware and software infrastructure is operating. While many issues remain, some stakeholders stated that e-Licensing will leverage these technical and human-knowledge investments for deployment at remaining agencies and boards.

The system backbone is operating. OET and the vendors have built the necessary hardware and software components to support current and future deployments. The backbone includes the Versa:Gateway and Versa:Regulation applications, secure citizen log-in authentication and management, e-payment services, and e-mail functionality required for e-Licensing transactions. The system is very stable with high uptime and has capacity to add more licensing entities with minimal capital expenditure. Help-desk procedures facilitate agencies' access to Iron Data Support and citizen access to the OET Support Desk. One interviewee commented that the "foundation is set" and another said that, "We have a good solid foundation."

Governance and change-process structures exist. A steering committee with agency and board representatives and a draft charter exist, though the committee has been ineffectively used. A User Group and Change Advisory Board will facilitate ongoing user support and cross-agency software modifications and will become more active as additional state entities deploy e-Licensing.⁶

E-Licensing has a stable funding source. While a sensitive issue with licensing interviewees, e-Licensing has a dedicated, multi-year funding source estimated to cover participating entities' Versa:Gateway implementation costs, though not their internal staff and adapter costs. Major infrastructure investments are completed and cash flow has improved with the most significant upfront expenses paid.

Vendor and OET staff have gained significant knowledge and experience.

E-Licensing is a very complex program involving multiple agencies, boards and licenses. Several interviewees acknowledged that the scope and complexity were underestimated and that the program suffered from OET staff and management turnover and insufficient oversight. The two pilot projects were difficult, but vendor and state staff learned from the experience. One interviewee stated that, "We've built significant team capacity to implement e-Licensing overall

⁶ The User Group is a forum for communication, best-practices and problem solving. The Change Advisory Board prioritizes and approves or rejects licensing entities' system enhancement requests.

as a program.” The OET team includes a former Iron Data programmer, a dedicated program manager and a technology-implementation manager, all of whom have significant e-Licensing experience. Some licensing interviewees highly complimented this team and the Deloitte and Iron Data staff.

The selected software is configurable and improving with each agency deployment.

Versa:Gateway and Versa:Regulation have a significant number of built-in data fields, reports and functions to facilitate configuration for each agency and board. Trained agency system-administrators can create reports and add, delete, or change many Versa:Gateway labels, field characteristics and validation rules quickly without any programming knowledge (Figure 4). However, Versa:Regulation is less configurable. Initial state users offered mixed reviews of both applications, with some saying the software works well and others not.

Figure 4. Versa:Gateway configuration screen

License Minnesota
Admin Main Menu Agency Main Menu Logoff
Logged in as

Field Use Detail - Maintain

Enter information about fields in your backend system and press "Save".
Press "Cancel" if you do not want to save your changes.

Agency:

| | License Type | Should the field be displayed to the user? | What is the length of the field in the backend system? | Is the field required by the backend system? | Can the field be edited on the Web by the licensee? | Regular Expression | Tooltip |
|---------------------------|--------------|--|--|--|---|--------------------|----------|
| Identification | | | | | | | |
| firstName | | <input checked="" type="checkbox"/> | 16 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| secondName | | <input checked="" type="checkbox"/> | 40 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| surname | | <input checked="" type="checkbox"/> | 40 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| organizationName | | <input checked="" type="checkbox"/> | 64 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| dbaName | | <input type="checkbox"/> | 64 | <input type="checkbox"/> | <input type="checkbox"/> | | |
| title | | <input checked="" type="checkbox"/> | 4 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| SIN | 1101 | <input checked="" type="checkbox"/> | 9 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| SIN | | <input checked="" type="checkbox"/> | 9 | <input type="checkbox"/> | <input type="checkbox"/> | | |
| SIN | 1102 | <input type="checkbox"/> | 9 | <input type="checkbox"/> | <input type="checkbox"/> | | |
| SIN | 1103 | <input type="checkbox"/> | 9 | <input type="checkbox"/> | <input type="checkbox"/> | | |
| SIN | 1100 | <input type="checkbox"/> | 9 | <input type="checkbox"/> | <input type="checkbox"/> | | |
| birthDate | | <input checked="" type="checkbox"/> | 10 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | mm/dd/yy |
| gender | | <input checked="" type="checkbox"/> | 1 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| race | | <input checked="" type="checkbox"/> | 10 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Contacts | | | | | | | |
| Main | | <input checked="" type="checkbox"/> | 12 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Address.streetAddressNbr | | <input checked="" type="checkbox"/> | 30 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Main Address.addressLine1 | | <input checked="" type="checkbox"/> | 40 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Main Address.addressLine2 | | <input checked="" type="checkbox"/> | 40 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Main Address.addressLine3 | | <input checked="" type="checkbox"/> | 40 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Main Address.city | | <input checked="" type="checkbox"/> | 20 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Main Address.country | | <input checked="" type="checkbox"/> | 40 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |

Done

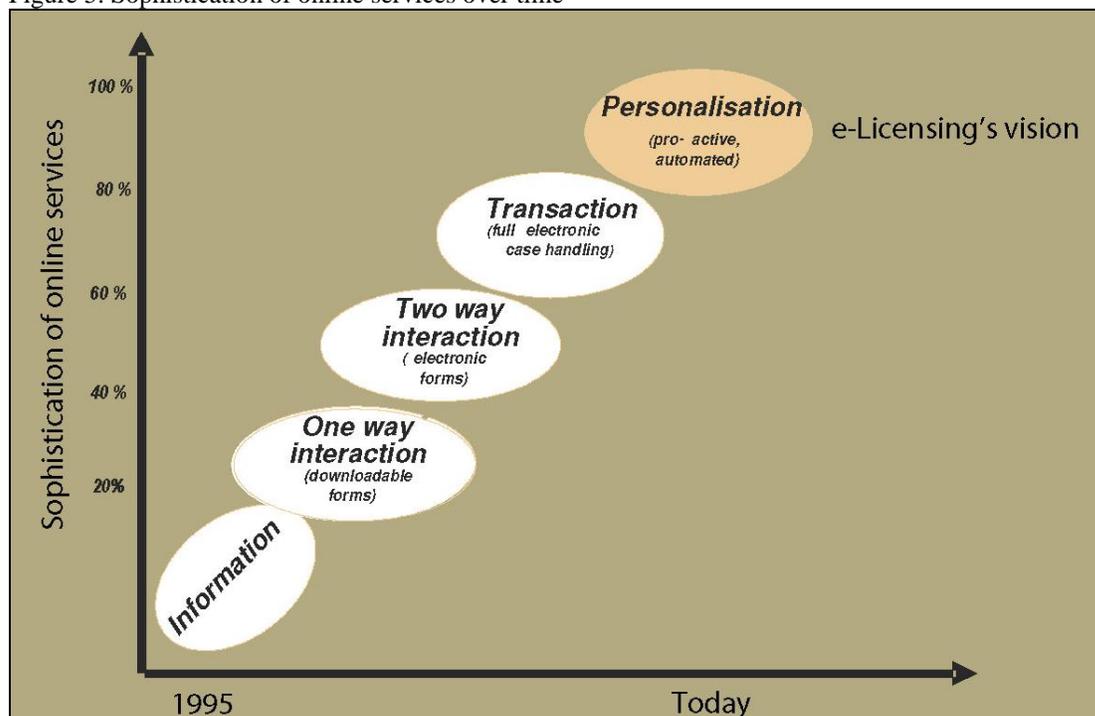
Source: OET e-Licensing project staff.

State agency and board users have complained about a number of design problems and limitations, such as too many tabs to navigate, hard-to-retrieve information, unfamiliar label nomenclature, and an unintuitive user-interface. Purportedly, an early 2012 Versa software release will address these issues. These changes and the departments of Labor and Industry and Human Services' custom programming could also benefit all user agencies. Sharing adapter code has also been discussed. Whether subsequent release versions and custom enhancements address current users' concerns is unknown. However, the software is not static and these problems are correctable, though potentially at additional cost.

E-Licensing supports the highest-level of online sophistication.⁷ E-Licensing's vision is to offer the fifth or highest level of this hierarchy:

1. Information: static Web-pages;
2. One-way interaction: downloading of forms (print and mail);
3. Two-way interaction: online submission and processing of forms;
4. Transaction: full-case handling, decision and payment; and
5. Personalization: Proactive and automatic (the system pre-fills an application with existing data or performs a service without user action or request).

Figure 5. Sophistication of online services over time



Source: modified from European Commission Directorate General for Information Society and Media, *The User Challenge: Benchmarking the Supply of Online Public Services*, September 2007, page 11.

⁷European Commission Directorate General for Information Society and Media's *The User Challenge: Benchmarking the Supply of Online Public Services*, September 2007, pages 11-10, http://ec.europa.eu/information_society/eeurope/i2010/docs/benchmarking/egov_benchmark_2007.pdf and eGovernment Expert Exchange System web site, "What is eGovernment?", <http://www.e4-info.eu/wiki/index.php/EGovernment>.

Minnesota licensing entities' current capabilities range from downloadable forms (Level 2) to varying degrees of online transaction (Level 4). In some cases, only renewals and not initial applications are processed online. Many licensing interviewees oppose e-Licensing because of no apparent benefits over their online licensing services and the high costs.

The current administration is supportive. The Governor's Office supports this initiative, which the previous administration began. Interviewees complimented the new executive sponsor and state chief information officer's openness to hearing stakeholders' input and fostering collegial working relationships.

Challenges

The significant challenges are licensing entities' opposition, program management shortcomings, an undecided level of allowed customization, and user-interface problems.

Stakeholder engagement and support does not exist. Licensing agency and board stakeholders have not provided real input and feedback on the project's scope, direction and execution since its inception. Several interviewees explained that the previous administration curtailed honest communication and stifled opposition. Interviewees described the Steering Committee as "misnamed or misused" and as being "steered" and said that meetings were for OET and the vendors to report their plans and decisions. Interviewees noted that the vendors' presence made licensing representatives reluctant to speak openly, and that OET became the project champion when the original one resigned as Labor and Industry commissioner.

All agency and board interviewees support the concept of online licensing, but almost none agree with this project's approach and selected solution. Many state participants are frustrated with the lack of communication, critical financial information and open discussion; their interactions with OET and the vendors; and the delivered product. The license surcharge, unexpected and unknown agency and board costs, and skepticism of real project benefits also contribute to stakeholder opposition.

Agency and board opposition cannot be overstated. Interviewees acknowledged a "race-to-the-back-of-the-line" atmosphere and some want to "pay-not-to-play" by continuing to collect the surcharge but not participate. Interviewees described the project as a "boondoggle," "waste of taxpayers' money," and an "embarrassment." Few licensing interviewees see any tangible successes to date.

E-Licensing's scope, key assumptions, and stated benefits are questioned. Many licensing interviewees noted that e-Licensing's original concept has narrowed significantly from every state license to professional and business licenses. One interviewee said that offering what the public expects (online services) has replaced "early proclamations" of significant cost savings and staff reductions. Another interviewee said the original concept was "whittled down to a master list of names."

Interviewees also questioned whether many citizens hold multiple business and professional licenses across agencies and whether a new business needs 11 different state licenses to open.⁸ They stated that most licensed professionals hold only one license and know their regulatory board or agency well. One interviewee said applicants can find his or her website faster through a Web search than the License Minnesota portal. Several interviewees said that excluding driver's, hunting and fishing licenses significantly reduced the one-stop shop's value.

Interviewees also explained that each agency's licensing requirements and processes are too different for one system, that their current systems manage the entire license workflow or cycle, such as logging complaints and recording investigations, and that their systems must connect to external, non-state databases.

Interviewees from agencies and boards with online transaction capabilities are the most opposed. Their agencies and boards have invested heavily in online licensing for several years and report that the current systems work well. They are concerned about replacing working systems with a less functional one at significant cost. Project staff reportedly told several interviewees there was no agency benefit or reason to migrate to e-Licensing.

The surcharge is resented. Most licensing agency and board interviewees ruefully noted that they collect the surcharge, but only OET and the vendors benefit. Licensing agencies and boards must fund internally their significant staff time on e-Licensing and the high adapter costs. Several people questioned the project's "high price-tag" and project management costs. Some interviewees described OET and Minnesota Management & Budget as defining "license" broadly to maximize surcharge revenues.

Many interviewees said their licensees have paid for their agency or board's existing online licensing system and are now paying for the e-Licensing system, but without additional benefits. Some interviewees also stated that their constituents are paying a disproportionate share. Interviewees commented that they have to explain the surcharge to angry licensees, and that applicants who prefer the paper forms to avoid the online banking fee or do not have high-speed internet access must also pay the surcharge.

Licensing entities are very concerned about their implementation and ongoing costs and how quickly the system can be updated for new licensing requirements. Interviewees complained about the number of staff hours required to implement e-Licensing and the significant adapter costs, which their own budgets must absorb. They have received very little information on the expected ongoing costs once the system is deployed and the surcharge expires. Some interviewees were surprised about their agency's responsibility for the adapter costs and current state Versa users are worried about bearing the system's ongoing costs if other agencies do not participate.

⁸ This often-quoted example is based on a new restaurant having to transact with the Secretary of State and these state entities: Revenue, Pollution Control Agency, Board of Electricity, Administration, Public Safety, Health, Agriculture, Gambling Board, Labor and Industry, and Employment and Economic Development. State of Minnesota – *Drive to Excellence, Project Business Case: "The Drive to a One Stop Shop,"* page 17, January 2005. http://www.state.mn.us/mn/externalDocs/Excellence/Drive_to_One_Stop_Shop_Licensing_Business_Case_09230_5033249_Licensing%20-%20Business%20Case%20One%20Stop%20Shop.pdf

A few interviewees stated that OET services cost more than when internally provided, complained that free services are converted to charge-back ones after the initial year, or doubted that cost estimates would be accurate. Some participants do not view OET as customer-oriented due to not listening, slow response and lack of communication.

Interviewees wondered how quickly Iron Data would be able to update the application to reflect new legislation, especially with many affected agencies requiring changes simultaneously. They noted that change requests during initial implementation were not always timely. Complicated new legislation will require staff time to explain the changes to Iron Data programmers, too.

Program and project management has been insufficient. Interviewees stated that OET did not realize e-Licensing's complexity and was hindered by senior management and program staff turnover. OET was newly created when e-Licensing started, and Deloitte staff began working without an OET program team providing direction. Some interviewees reported that agencies' lack of staff commitment also hampered progress.

Interviewees described continually adjusted timelines due to set-backs and problems, unclear roles and responsibilities, overly optimistic status reports, too few vendor staff to handle more than one agency implementation at a time, surprises about schedules and costs, and multiple but separate contacts by OET and vendor staff on the same issues. The application prototype stage was skipped at three agencies and user acceptance testing was not conducted at one agency. Out-year agencies have received little information or direction to plan for implementation.

The permissible level of software customization is unresolved. E-Licensing is the middle point of an IT project continuum. One end is the large enterprise-wide project, like the state's recently completed financial system, SWIFT. A single agency led the project with extensive agency participation. After completion, SWIFT met most agencies' requirements but not all. The opposite end is the single-purpose project: a contractor builds the system to the agency's unique specifications.

E-licensing is a hybrid. OET is implementing an enterprise system with agency-level configuration. However, agency development follows the single-project view with agency staff requesting or expecting significant customization. A couple of interviewees noted that a balance is necessary between a standard configuration and each agency's custom requests. But, the program lacks clear definitions and expectations on customization, which can be expensive.

Agency-level work has been unduly difficult. OET contracts with Deloitte to implement Iron Data's Versa:Gateway and Versa:Regulation applications, and Deloitte sub-contracts with Iron Data to configure and customize the software to the Deloitte team's business requirements. State licensing staff consistently described the following problems and frustrations with the first four agency-level projects:

- Key requested functionality was reluctantly provided or never was.
- The extended length of time to deploy the application, the significant demand on staff time for planning and implementation, and incremental progress.
- Vendors not understanding the complexity of the agency's licenses.

- Lack of configuration to agency requirements.
- Conference pilots did not reflect agency requirements despite significant time on visioning, planning and documentation.
- The user interfaces are unintuitive, have reduced staff efficiency, and resulted in workarounds to accomplish tasks.
- Inability to sign-off or control the vendors' work.
- Status-updates were lacking or OET and the vendors had different information.

Several licensing interviewees were frustrated with the vendors' reluctance to make modifications. One person reported that, "We find a problem and they tell us it's not a problem, then they ask us what we'll do about it, then we dig in and they make the change." Another interviewee said "it took cajoling, pleading, and threatening [to get the feature]," which was "built begrudgingly."

Both Deloitte and Iron Data are experienced vendors, detailed statements of work were created, and the "as-is" and "to-be" processes thoroughly documented. Interviewees' comments suggest that the unresolved configuration-customization issue is creating an unintended dynamic in the Deloitte – Iron Data relationship. When an agency requests a customization or an unexpected problem appears, Deloitte's options are to request additional state funds, convince the agency to accept less, assume the cost, or negotiate with Iron Data to provide free work. The result is conflict among all parties, slow deployment and agency disappointment.

Several state users dislike the applications' design. Several interviewees said the Versa:Gateway and Versa:Regulation user-interfaces are unintuitive and inefficient and complained about the multiple tabs and screens, unfamiliar data-field and tab names, and unappealing layouts. Examples include:

- Inability to attach or upload multiple documents at once.
- Unnecessary steps, such as a drop-down menu with only one option.
- Accessing different screens to view data that the former system displayed together.
- Multiple tabs divide a screen when those fields should appear together.
- "Cryptic" error messages and no explanation to correct a user-encountered problem.
- The tab named "License" does not describe all of an agency's required forms.
- Long alpha-numeric fields are truncated onscreen.
- Multiple screens for entering paper applications.

State users said their ability to serve clients has diminished because it takes more time to find or data enter information. They also reported applicants' frustration with forgotten passwords and the complexity of Versa:Gateway's multi-tab layout.

Trained agency system administrators can fix some configuration problems. Other issues, like the multiple tabs, require Iron Data to perform custom coding, which is an additional expense to agencies. One interviewee noted that these issues usually appear as users gain more experience with the system and that agencies should have funds dedicated annually for system enhancements. Additionally, future software releases could address problems or offer enhancements that affect many Iron Data clients without additional state cost.

Supplemental training would benefit new users with a few months' experience to ensure that they use the applications effectively and efficiently. One interviewee described "stumbling upon" solutions to problems or to more efficiently accomplish a task. However, some user-interface problems are inherent in the Versa applications' underlying platform and common in many software programs. Examples are accidentally changing a drop-down menu selection when moving the mouse to prohibiting certain characters in file names.

Conclusions and Recommendations

Management Analysis & Development was asked to:

- Identify stakeholder concerns and determine how the Minnesota Enterprise e-Licensing System can best achieve its objectives within the original timeframe and budget.
- Evaluate the likelihood of the project succeeding given its present status and path, and offer alternatives, if appropriate.
- Recommend where the Lean process could be applied.

Conclusions

The e-Licensing initiative faces widespread stakeholder opposition due to required board and agency participation; stakeholders' inability to influence the scope, vision and direction; few perceived benefits; high project costs; negative impressions of the selected software; and frustrating implementation experiences. The challenges are significant but the initiative can build on:

- An operational system backbone.
- Established governance and change-process structures.
- A stable funding source.
- Vendor and OET staff knowledge and experience.
- Configurable software that is improving with each agency deployment.
- The ability to offer the highest-level of online sophistication.
- The Governor Office's support.

The Minnesota Enterprise e-Licensing System is unlikely to achieve its current objectives unless stakeholders strongly commit to the vision and direction. An enthusiastic champion and financial support for agencies' internal staff and adapter programming costs may reduce resistance. However, stakeholders view the initiative as a waste of funds with few citizen or agency benefits, and many are aware of the first four licensing entities' difficult and frustrating experiences. Success also requires:

- Defining enterprise-wide front-office and back-office functionality and parameters on when the e-Licensing budget pays for agency customizations.
- Participating entities to accept a standardized software package.
- Directly contracting with Iron Data for configuration and customization work.
- Monitoring the next software releases to confirm current problems are addressed.
- Strengthening the Steering Committee by adopting its committee charter and clearly defining approval policies and procedures.

- Limiting committee membership to board directors and commissioner-level appointees who can commit their organizations' resources to the initiative.
- Creating an advisory committee of technical and licensing managers to assist the Steering Committee.
- Utilizing more frequently the Change Advisory Board to make decisions on agency and enterprise customizations.
- Funding more customization to improve state-user and citizen interfaces.
- Providing temporary staff to boards and agencies during and after implementation so permanent staff can participate in system planning, to assist licensees using the new system and to prevent application backlogs.
- Providing intensive, post-implementation support and training to ensure that users efficiently navigate the system and take full advantage of its capabilities.
- Engaging Lean experts to help agencies streamline processes before implementing e-Licensing.

The absence of cost-benefit and business-process information has complicated this assessment. While time-consuming, thoroughly researching these questions would increase confidence in how to proceed:

- What staff efficiencies, system savings and citizen benefits does e-Licensing create above current licensing processes?
- What level of online-transaction sophistication do citizens desire and how often would they interact with the system?
- How do e-Licensing's future implementation and ongoing costs compare to agencies' current costs and potential system replacement or upgrade costs?
- What is the likelihood of expanding e-Licensing to non-participating agencies, such as Natural Resources, Public Safety, Transportation and Pollution Control?
- How well do Versa:Gateway and Versa:Regulation meet most licensing entities' business requirements?
- What is the extent and cost of custom coding to meet entities' requirements?
- What types of statute and rule changes require custom coding versus agency-administrator configuration?
- How can e-Licensing complement licensing entities' past investments?
- Is replacing back-office systems more cost effective than creating adapters?

A few state licensing staff recommended terminating the initiative, while others said to "stop and study." Information on future costs and licensing entities' business requirements is insufficient to confidently terminate e-Licensing now; given the state's investment to date, the potential to improve the software applications, and use by at two boards and one department.

Recommendations

The Minnesota Enterprise e-Licensing System envisions the highest level of online-transaction sophistication and citizen convenience and cost savings through system consolidation. However, many state licensing staff strongly question the initiative's purpose, cost and technical solution.

The Steering Committee must have an active role in discussing and deciding e-Licensing's future direction. Management Analysis & Development recommends the following sequence of actions to develop a stakeholder-supported approach to achieving the initiative's intent of one-stop, online licensing for professional/occupational licenses and business/commercial licenses:

1. Create a common understanding about the current direction.

As the lead proponents, OET and the vendors should present their case to the Steering Committee on why the current plan is optimal for citizens, licensing entities, and the state. Three to four half-day sessions scheduled over four to six weeks would allow:

- Open discussion about the initiative.
- Presentations on the e-Licensing vision and benefits, software capabilities, finance plan, and future operating costs.
- Explanation of how e-Licensing supports the Minnesota iGov Project's statewide goals of efficient, effective, stable and secure IT solutions.
- Greater understanding of stakeholders' concerns and perspectives.
- Confirming or correcting perceptions.

Devoting each session to a specific topic would allow OET program and vendor staff to present detailed information and possibly resolve stakeholders' questions and reservations.

A common understanding does not imply agreement or a decision. This recommendation's goal is to ensure that all stakeholders have the same information about the initiative, key issues and concerns.

2. Confirm or revise the initiative's vision and objectives.

Stakeholders' common understanding will inform discussions about the current direction's value and potential revisions to the vision and objectives. Three key vision issues are:

- What is the citizen-experience vision? The current plan proposes a highly personalized, proactive, automatic and seamless service for licensees, but less sophisticated alternatives may be more economical and quicker to deploy.
- What is the extent of the enterprise-wide effort? Does the vision include all professional and business licenses or just agencies and boards without online functions? What technology components should be enterprise-wide: a common portal, the front-office system, the back-office system, and/or citizen log-in authentication and management?

- How can the initiative support statewide goals for efficient, effective, stable and secure IT solutions?

The discussion should include all the participating licensing agencies and boards, though the results might lead to excluding some from the future participation, such as entities with relatively new systems.

Though difficult to prevent, past decisions should not influence vision discussions. This recommendation's goal is to confirm or revise the e-Licensing initiative's desired endpoint without regard to unrecoverable technology and staff-time investments. The surcharge's limited duration should not determine the vision's time frame, either.

3. Determine the best approach to achieving the vision.

Once the initiative's vision is confirmed or revised, the Steering Committee should define the management, operational, and technological criteria for evaluating the best approach for achieving the vision. E-Licensing's current hardware and software infrastructure should be the primary technical candidate, given the state's investment, three active state user agencies, and Versa:Gateway's flexibility to offer different levels of online-transaction sophistication. For example, the software can support basic online-submissions without back-office system adapters.

However, other technical solutions should be considered. One interviewee suggested a state-developed Web interface using the .NET Framework programming language, with these purported advantages:

- Easier connection to a back-office system.
- Replicable to other agencies.
- Strict data-naming standards.
- Better front-end data validations.
- More attractive user interface.
- State-owned and modifiable code.

Such alternatives may avoid the expensive adapters and a data repository can upload information from licensing entities' back-office systems to show citizens all their business/occupational licenses.

Applying Lean

One study objective was to examine how Lean processes could assist agencies to effectively implement the new Versa software products. However, licensing entities' paramount concerns are e-Licensing's purpose, financing and direction, which Lean techniques are incapable of addressing. Once the e-Licensing initiative's current direction is confirmed or revised, then Lean should become a practice during agency planning stages. Currently, the Deloitte team looks for process improvement and standardization during the vision and design stages.