



**One-stop E-permitting:
A statewide regulatory streamlining initiative**

Executive Summary Report

State of Oregon
Department of Consumer and Business Services
Building Codes Division
www.oregon-epermitting.info

Prepared by Willamette Consulting, Inc and Eclipse Solutions
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EXECUTIVE SUMMARY

The Oregon Department of Consumer and Business Services (DCBS), Building Codes Division (BCD) engaged Willamette Consulting, Inc (Willamette) and Eclipse Solutions, Inc. (Eclipse) to evaluate the feasibility of a statewide e-permitting system. This analysis phase of the e-permitting project is part of an on-going State of Oregon effort to improve the vitality and safety of the building industry by making it easier for builders and homeowners to understand and comply with building codes and the building permit processes used by 130 jurisdictions to issue as many as 800,000 permits annually.

This executive summary is an overview of our analysis and recommendations. The *DCBS E-Permitting Analysis Final Report* contains supporting commentary and data. Our report findings indicate that:

1. An off-the-shelf system is feasible and could be implemented.
2. Many benefits could be realized by leveraging a statewide system.
3. Economies of scale would be achieved by pooling systems and resources across building departments. A preliminary estimate of a statewide system would cost \$51.7 million over the implementation period; if local jurisdictions continue to develop independent systems, the cost could be more than twice that amount. As part of the next steps, the Department should complete a budget analysis before final estimates can be provided.
4. Many of the most important benefits would be impossible to achieve using independent systems.

PURPOSE OF THE STUDY

The purpose of the study was to determine the current business and technical requirements of jurisdictions for an integrated, full-service, statewide e-permitting system; identify and evaluate software options to meet these requirements; recommend the software option that best meets the needs and constraints; estimate benefits and costs of a single statewide system versus deployment of independent systems for each jurisdiction, and provide a plan for implementation.

METHODOLOGY

The team assessed jurisdictions' business requirements, researched software solutions and modeled costs.

Public Input and Research. In order to evaluate the needs of local jurisdictions related to e-permitting we first conducted a survey of building officials to gather information about current permitting processes and capabilities. Nearly 100 percent of jurisdictions responded to the email and Web survey. They provided data critical to defining jurisdictions' business needs, which were documented in the form of system requirements. Next, four town-hall style meetings were conducted throughout the state to discuss the project with local jurisdiction staff and gather additional information and requirements. Finally, interviews were conducted with a representative sample of jurisdictions to determine the current technology requirements and limitations faced by local government.

Evaluation of Software Solutions. Based on information provided by jurisdictions, the project team identified four potential software solutions for a single statewide e-permitting system including: procurement of Commercial Off-The-Shelf (COTS) software; a public/private software development partnership; transferring a system from another multi-jurisdictional agency; and creation of an open-source community. In order to gather information about COTS solutions we invited vendors to demonstrate their products and show how they would address the unique requirements of a statewide solution for Oregon.

BENEFITS

We identified the following benefits from implementation of a statewide e-permitting solution:

- **Jurisdiction Independence** – Allows more standardization of processes while at the same time allowing jurisdictions to continue to set rates and fees and collect and manage local revenue independently.
- **Building Inspector Pooling** – A statewide e-permitting system would enable jurisdictions to selectively and voluntarily pool building inspectors to support surges in inspection requests and building activity.
- **First Responder Support** – Emergency responders could have direct access to building information during fire, medical aid, and hazardous materials incidents potentially reducing on-scene time, reducing damage and preventing responder and citizen injuries.
- **Business Continuity Support** – Data on existing buildings and in-process construction would be available from the statewide system under almost all disaster scenarios because the systems and data would be housed in a location away from the disaster area. This is particularly beneficial since permit and inspection processes are critical to disaster recovery because they facilitate damage assessments, reconstruction efforts and rehabilitation planning.
- **Economies of Scale** – The existence of a statewide standard building code presents an opportunity to implement a system that all jurisdictions can share at a fraction of the cost of each jurisdiction implementing its own.
- **Improved Communication with Customers** – Builders and homeowners are increasingly demanding that governments offer improved communication methods, especially in rural areas. A statewide system would allow access to, and “real time” communication with a building department from any remote location, resulting in a significantly reduced need to travel from home or office to obtain a permit and the freedom to send and receive permit information 24 X 7.
- **Best Business Practices** – The system could make use of the best business practices used by jurisdictions statewide.
- **Improved Customer Service** – With routine communications and customer transactions automated through a statewide system, jurisdiction staff are available to address higher-value, complex customer questions and issues.
- **Building Industry Benefits** – To the extent that the standardization of process and enhanced communication will save time and effort for building contractors it would enable additional building activity, faster completion of building projects and cash savings to the industry and consumers.
- **Inter-Jurisdiction Coordination** – In some cases the approval of a permit granted by one jurisdiction is a precedent to another jurisdiction granting a permit. For example, the county may need to issue a septic permit prior to the city issuing a building permit. The statewide system could coordinate this activity among jurisdictions and make the process more transparent and less frustrating for customers and would also allow customers to apply for and purchase multiple permits from multiple jurisdictions through one system.
- **Increased Compliance** – The capability to obtain permits remotely may increase participation in the permit process, particularly for remote property owners. In addition to improved compliance, additional permit revenue could result.
- **Point of Sale Permits** – An opportunity exists to establish point of sale permitting at home improvement and building specialty stores for typical homeowner projects where permits are required such as water heater replacement. Improved compliance and additional permit revenue could result.
- **Property Location and Identification**-A statewide system would provide a central repository of property location and identification making it easier for contractors and homeowners to find the building department serving them.

CHALLENGES

The following challenges must be addressed to ensure success of a statewide e-permitting solution.

- **Funding Model/Adoption Rates** – The rate which jurisdictions adopt and their customers choose to use the statewide system will vary based on the system’s perceived value and the financial impacts of the funding mechanism. The mechanism for funding the system and the best distribution of the costs among the stakeholders will need to be determined. For example, the funding model could be any of the following:
 - Collect a fee on every permit statewide;
 - Collect a fee on permits that go through the system;
 - Charge a subscription fee to builders and developers;
 - Charge a fee to jurisdictions based on size;
 - Any of the above could include Certificate of Participation (COP) financing;
 - Pursue federal funds.
- **Process Re-Engineering** – The statewide building code makes implementation of an e-permitting system possible by creating an environment in which the building code itself is standardized. Nevertheless, there is wide variation in local business processes. Implementation of the statewide system would require development of a set of standard business rules (processes) that are sophisticated and flexible enough to support unique local requirements, yet allow for implementation of a statewide solution.
- **Property Location and Identification** – Proper identification of a piece of property as it is being developed (sold, subdivided, multi-unit, etc.) is problematic in many jurisdictions. Though it will continue to be a statewide challenge, the vendor products reviewed for this study have sophisticated methods that will help address these challenges.
- **Plan Review Implementation** – Architects, engineers, designers and local jurisdictions use various types of software to draw, review, and transmit plans. Implementation of a plan review component may require a standardization of software tools or development of a platform that would allow interoperability of current systems. At this time, jurisdictions’ systems have not been assessed to ascertain if they are robust enough to handle the e-documentation infrastructure required of such a feature.
- **General Implementation Challenges** – Implementation of this system will face many of the same challenges faced by any complex software implementation. Most significantly are the conversion of historical data and paper records, integration with other jurisdiction systems, and integration with those jurisdictions that already have systems.

RISKS

Of the implementation risks identified in the detail report, three were most detrimental. First, there is a significant risk to the project if the full costs of implementing and operating the solution are not considered – though our numbers can be refined and various strategies used to possibly lower the cost (like using more state staff and less software-vendor consulting staff) they are a good starting point that considers all dimensions of cost. The state will need to continue to refine cost estimates to accommodate changes in assumptions such as a revised staffing approach. The second and third risks are related to possible low adoption rates by jurisdictions and stakeholders respectively. The accessibility features this solution will provide appear to be in high demand and would provide significant incentive for jurisdictional adoption. Anecdotal evidence suggests that constituents perceive value in the solution and would be willing to pay some, as yet unknown, amount to support it.

OPERATIONAL COSTS AND RECOMMENDATIONS

Cost estimates were developed for each of the four potential solutions based on a project duration of 11.5 years. The first year and a half would be devoted to planning and preparation, followed by a ten-year implementation and operation timeframe.

Operational Cost Estimate. The total cost of the project is estimated to be \$51.7 million over the 10-year implementation and operational period. Participation by jurisdictions would be phased in over this period.

Software Recommendation. Our report recommends the commercial-off-the-shelf option because it best meets requirements, has fewer risks, would be operational sooner, and was not significantly more costly than the other three potential solutions.

The software configuration and personal services cost estimate includes items added to specifically address the concern of jurisdictions to improve their business processes and ensure quality customer service. The estimate also includes: software acquisition, annual maintenance charges, hardware acquisition, end-user training, professional services and internal staff costs for initial and ongoing system installation and configuration, conversion of historical data, workflow development and programming, address/parcel data integration, system customization to meet unique needs, report and form development; and interfaces with jurisdiction specific systems such as finance. Personal services costs were based on using primarily software vendor professional services. Using independent consultants or state staff in place of much of the software vendor professional services may reduce total project cost.

NEXT STEPS

Based on our findings, implementation of a statewide e-permitting system appears to be viable. In order to move the statewide e-permitting initiative forward and begin providing benefits to citizens and stakeholders, we recommend the following steps:

- **Define Funding Mechanism.** Decide how the construction and operation cost of the solution should be funded by working with stakeholders including jurisdictions, builders and citizens to recognize the benefits and balance these against any new costs incurred by each stakeholder group.
- **Standardize Permitting Processes and Business Rules.** Bring a diverse group of interested jurisdictions together to develop a standard set of business rules that everyone could adopt.
- **Conduct a Competitive Procurement.** The process used to develop standard business rules could be used to refine the functional and technical system requirements for use in the Request for Proposal. The largest solution vendors are looking forward to the opportunity to submit competitive proposals and help create a statewide e-permitting solution.
- **Budget Analysis.** Development of a fiscal impact estimate prepared by the Department.