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# IMPLEMENTATION AND MANAGEMENT OF INNOVATIONS THAT IMPACT MUNICIPAL PROCESSES

APS1012 – Management of Innovation in Engineering

Team 3

## EXECUTIVE SUMMARY

The existing permitting processes in municipalities were explored and the disadvantages of these practices were investigated. Based on previous innovative solutions adopted by different municipalities around the world and exploring new advances in technology, a framework for three levels of innovative phases were introduced. This was envisioned as a roadmap for municipalities to navigate their transformation processes towards an integrated and automated e-permitting platform. In order to move from one level to another, municipalities need to go through a disruptive and radical change which makes the implementation challenging. In this paper, the benefits of such implementation are explained, and its barriers are identified.

For the first step towards implementation, the stakeholders involved in this process were identified and the impact of such transformation on each of the stakeholders was investigated. This is a crucial step towards the success of the innovation. The implementation of e-permitting within municipalities would drastically change the role that nearly all stakeholders play in the construction approval process. From an applicant's perspective, schedule risk would be mitigated substantially by having a clearer view on what has traditionally been a sheltered and hidden review. The result of mitigated schedule risk will lead to less mobilization-related construction claims, and a more easily planned tendering period leading up to the submission, revision, and approval to proceed with work. From the Municipality's perspective, e-permitting introduces the opportunity to increase efficiencies by not requiring hard copy drawing sets for multiple City groups that are passed from desk to desk pending review. A cloud-based system allows for a

more organized, traceable internal process. Of course, with the implementation of a soft copy review process comes a degree of disruption. The degree of disruption merits consideration of how to limit the duration and overall impact of the changed process. A gradual transition is recommended to minimize risk and disruptive impact. The effect of an e-permitting system with regards to external agency interaction (stakeholders other than the governing municipality) is the ability to avoid double counting or confirming compliance to similar standards that additional reviewing parties would also be confirming. The final process, although digital, will likely be operated and maintained by municipalities. It is for this reason that early and constant stakeholder involvement will be crucial to successful implementation.

With all the information gathered, a phased approach for implementing new practices was developed. The implementation plan has three main phases. The first phase will focus on documentation of the 'As Is' process through workshops and involvements of stakeholders. This phase includes a minimal release of the product in order to collect stakeholders' feedback, training them with the new process, and finally the integration of new system with existing legacy systems in municipalities.

The second phase would be the development and advancement of the e-permitting platform based on the feedback collected from stakeholders. In this phase, all the staff and external stakeholders will be trained. Phase three would focus on digitalization of city's archive and making these records available for purchase by request, thus creating a revenue stream as a cost-recovery mechanism for the investments in this innovation.

Finally, a successful implementation of an e-permitting platform in City of Vantaa, Finland, is explained as an example. This example emphasizes on the fact that these innovative transformations are feasible for any municipal jurisdictions.