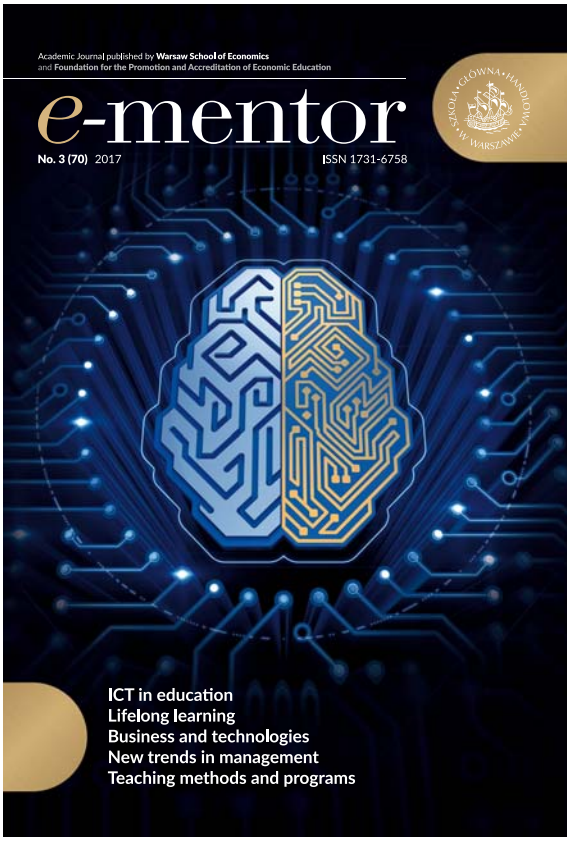
e-mentor
DWUMIESIĘCZNIK SZKOŁY GŁÓWNEJ HANDLOWEJ W WARSZAWIE
WSPÓŁWYDAWCA: FUNDACJA PROMOCJI I AKREDYTACJ KIERUNKÓW EKONOMICZNYCH



2017, nr 3 (70)

Ty Price Dooley, *The Role of Municipal Websites Within Rural Illinois Municipalities*, „e-mentor" 2017, nr 3(70), s. 73–76, http://dx.doi.org/10.15219/em70.1307.

The Role of Municipal Websites Within Rural Illinois Municipalities

Ty Price Dooley

The sheer size and scope of the Internet has had a tremendous impact on municipalities around the world. Local governments initially saw the Internet as a simple repository of information that could be used to distribute information to the public. That perspective evolved into what has become a complex system of tools that local governments can leverage, to not only enhance the distribution of information to the public, but also to provide a whole host of opportunities that both the public and business sectors can use to engage interactively with local government.

While the literature on e-government adoption is extensive (Srivastava, Ray, 2016, p. 1; Norris, 2009; Moon, Norris, 2005, pp. 43–60) most studies have focused on e-government from the perspective of the public (Anthopoulos, Reddick, Giannakidou, & Mavridis, 2016, pp. 161–173; Norris, & Reddick, 2013; Cordella, & Iannacci, 2010, pp. 52–66; Layne & Lee, 2001, pp. 122–136; Moon, 2002, pp. 424–433). Very few studies have examined the specific decision-making processes involved in a municipality's selection of a website and the tools that would be deployed. Moon and Norris, in their 2005 study, found that the size of a municipality and the ability to be innovative were significant predictors of website adoption (Moon & Norris, 2005, pp. 43–60). This paper outlines the advantages and difficulties of municipal website implementation and maintenance by examining rural Illinois municipal web presence and explores preferred policy actions for those communities.

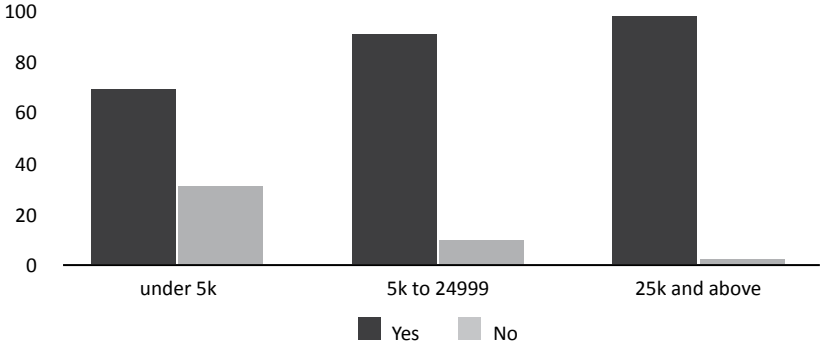
The state of Illinois has the 5th largest economy in the United States, with a Gross Domestic Product (GDP) of $776.9 billion (United States Department of Commerce, Bureau of Economic Analysis, 2016). To put that into perspective, the economy of Illinois is larger than the economy of the Netherlands. Thus, issues related to development can have a profound impact not merely within the state, but across the United States and globally. Rural municipalities in Illinois that fail to have an Internet presence as a communication tool fail to take advantage of an affordable means to communicate with residents, stimulate economic development, promote tourism, and present their community as progressive and sustainable. Ultimately, these communities are a drag on the Illinois economy. According to the Illinois Institute of Rural Affairs, "small rural communities of fewer than 4,000 residents are at a strong advantage, related to development, if they have a solid Web presence" (Schuytema, 2007). Although large local governments are more likely to have a website, many small local governments are also taking advantage of the Web despite their lack of financial and technical resources (Cassell & Mullaly, 2012, pp. 91–100).

Background

The history of e-government can be traced back to the adoption of information technologies by large urban centers in the 1950s and 60s, when mainframes and other computing technologies first became commercially available (Moon & Norris, 2005, pp. 43–60). Those technologies enhanced efficiencies and assisted with the basic functions of service delivery and innovation. Federal investments in public sector municipal website development also played a significant role (Moon, 2002, pp. 424–433). Our modern notions of e-government, as illustrated by the municipal website, owe their use and deployment by cities to the rapid growth and popularity of the Internet in the late 1990s and early 2000s. Emerging from this era, municipal website functionality evolved from simple content delivery, including both transaction processing and stakeholder engagement (Layne & Lee, 2001, pp. 122–136).

E-government is defined as the delivery of information and services by municipal governments through the Internet (West, 2001). Community development services range from the posting of municipal revenue information, such as tax rates, on the municipal website, to the inclusion of information on city forms, information on utilities, and enterprise zones. The impact of e-government as an effective means of community development should not be understated. In a survey of 286 municipalities in Illinois, 58.7 percent of respondents viewed web-based technology as an important or very important element of community development (Johnson & Walzer, 2005). In data obtained from the same survey of Illinois communities, only 70 percent of rural municipalities had a website,

Exhibit 1. Municipal Web Presence in Illinois



Source: Author's original graph.

while more than 90 percent of all other municipalities in the state had their own web presence.

Merely having a web presence is not the only distinguishing characteristic. The form of web presence utilized by municipalities is equally important. Beyond the standard characteristics of a basic website, web presence types include engaging in social networking and sharing various resources and artifacts – print, audio, video (Lowenthal, Dunlap, & Stitson, 2016, pp. 320–329). Layne and Lee (2001, pp. 122–136) classified municipalities into stages, based on the type of web presence utilized. In order of sophistication, the stages consisted of:

1) catalogue – having an online presence with downloadable forms.
2) transaction – engage in basic online transactions (such as bill pay).
3) vertical integration – connect local services to state and federal databases.
4) horizontal integration – link various municipal services in one place online.

Exhibit 1 details the extent of web presence in Illinois municipalities across population types.

Context and Importance of the Problem

State government actions, business relocation, environmental mandates, declining infrastructure, rising employee benefits costs, and a declining or stagnant tax base typify the challenges rural cities face in the state of Illinois. Rural communities in Illinois, like others across the country, tend to have a competitive disadvantage when compared with urban centers (Wilkinson, 1999, p. 94) relative to economic development. One disadvantage that rural municipalities can face would be the lack of adequate infrastructure, including technology (Siegel & Waxman, 2001, pp. 1–38). When examining municipal websites nationally, rural municipality websites, typically, are updated less frequently, and are more difficult to navigate, which makes them less usable for clients and prospective clients (Scott, 2005, pp. 151–165). This can leave rural communities at a disadvantage when trying to compete successfully for private industry (Siegel & Waxman, 2001, pp. 1–38). This competitive disadvantage can lead to higher rates of unemployment and underemployment, coupled with low per capita income and limited employment opportunities (Duncan, 2000). This overall lack of resources tends to lead to reductions in overall levels of community capacity, characterized by an under-trained human capital base (Siegel & Waxman, 2001, p. 11).

This leads to the question: what role can a municipal website play in enhancing the social, economic, and political environment within rural Illinois cities? Municipal websites play an important role in serving citizens by providing quicker access to offerings, regardless of location, time, or physical limitations (Feeney & Brown, 2017, pp. 62–74; Thomas & Streib, 2003, pp. 83–102). However, smaller municipalities are less likely to leverage the web as an affordable communication tool. Even though the web has become an essential means to transmit information and promote commerce, small governments may avoid utilizing it for a number of reasons, including limited staff, lack of technical knowledge, lack of financial resources, and legally mandated website posting requirements (Moon, 2002, pp. 424–433). Although these reasons are legitimate, the availability of cost-efficient web development and maintenance resources, in addition to sources that provide a comprehensive list of mandated posting requirements, make implementation of a website more attainable.

A study conducted in Northeast Ohio found that urban communities and community education levels were statistically significant influences related to community website implementation. From this study, one can deduce that rural communities populated by citizens with lower education levels are less likely to implement a website. However, a recent municipal e-governance survey indicated that as more people become familiar with using technology and social networks to communicate, and the cost of technology decreases, the digital divide is likely to decline along economic and educational lines (Holzer, Fudge, Shick, Stowers, & Manoharan, 2012).

Once a municipal website is implemented, opportunities exist for a city to leverage economic

development opportunities to promote the community to businesses. This can be done through postings related to economic incentives such as Tax Increment Financing (TIF) and Enterprise Zones. The city's existing tax structure can also be communicated. Additionally, the municipality can coordinate and mobilize the local community for the consideration of Home Rule Tax referendums.

Measures

The decision-making process for a small city to transition from no web presence to the construction and maintenance of a website can be a daunting task. This section provides an overview of how municipal web presence policy options are analyzed. Key indicators are presented in scorecard format. Scorecards can be a useful tool for monitoring and forecasting impacts of policy decisions (Dunn, 2012, p. 24). Combined, the four indicators provide a broad, integrated assessment of whether the adoption of a web presence for a municipality is appropriate. The indicators are practicality, cost, implementation, and operation.[1] The indicators will assess the policy options. The assessment protocol for each indicator is either positive or negative. The four policy options include:

1) doing nothing and continuing to operate without a website,
2) utilizing a contracted service provider for initial website development with limited support, training, and maintenance required by the municipality,
3) contracting a service provider for website development with full support and maintenance,
4) contracting or hiring an IT professional to design and maintain a website.[2]

These policy options are evaluated based on criteria related to practicality, cost, implementation, and continued ease of operation. They are listed in Exhibit 2, detailed below.

Discussion

Discussion Main Point: Contracting a Service Provider for initial website design and limited support is the preferred option.

Based on the preselected criteria, three of the policy options evaluated resulted in two negative outcomes and two positive outcomes. The second option, utilizing a contract service provider for initial website deployment and limited client support relative to operation, resulted in three positive outcomes and one negative outcome. The second option is the preferred option. It allows for the initial design and deployment of the website. This option also allows the municipality to have direct access to the website, which ensures that information can be uploaded in a timely manner. This is especially important when it comes to legally mandated posting requirements and emergencies. Although municipal employees will have to assume the responsibility of building the website, this option, typically a design template, would make the task manageable for employees with limited technical knowledge. Considering practicality, cost, implementation, and continued ease of operation, utilization of a contract service provider with limited support is the recommended policy option for rural communities with limited capacities and resources.

Not recommended is the status quo policy option. Continuing to operate without a municipal website denies a municipality the opportunity to benefit from an affordable and advantageous resource. Additionally, the positives associated with the do nothing policy option are a lack of cost and no increased workload. Upon further evaluation of other policy options, website costs and increased workloads should be minimal once implementation is complete; therefore, these criteria hold less value when associated with this policy option.

The final two policy options are both feasible; however, contracting or hiring an IT professional for a rural Illinois municipality, in light of revenue constraints, might not be financially feasible. Because of the small size of most rural Illinois communities, it may also be difficult to find a qualified individual for this role. Furthermore, the utilization of a contract service provider with full support would be cost-prohibitive for a number of rural communities. Moreover, possible delays in updating the website, particularly during emergency situations, could be problematic.

Findings

Finding 1: Implementation requires a financial commitment.

Rural communities must embrace and review the digital infrastructure of their community's ongoing budget (Schuytema, 2007, p. 7). Once the community sets a budget for the implementation and continued operation of its website, it must designate qualified personnel to build the community's website using the platform's design template. This may require

[1] Practicality refers to the sensible, reasonable, viable selection for the proposed policy option. Cost is measured by the actual monetary costs that the municipality would incur for the services provided. Implementation refers to process that the municipality would follow in order to implement the policy option. Operation refers to the ongoing resources that would need to be deployed by the municipality to maintain the website.

[2] Utilizing a government-specific website platform with population-based pricing was not included in the assessment due to difficulties in determining a fixed cost, because of substantive variance in population distribution among rural communities in Illinois.

Exhibit 2. Policy Options for Municipal Website

Policy Options	Practicality (P)	Cost (C)*	Implementation (I)	Operation (O)	P C I O	Practicality Cost Implementation Operation
Status Quo	Maintaining the status quo prevents the municipality from taking advantage of an affordable means to communicate and promote itself	No cost	No action required	Non-website related means of communication are time-consuming, not conducive to providing information, and one-way	P C I O	Negative Positive Positive Negative
Contract Service Provider w/Limited Support	The platform is designed to assist municipal employees with building a website with limited technical knowledge. Design can also be conducted by the company for a fee	$500 for design and $50 for monthly maintenance ($1100 annually)	Employees, who have limited time to take on new responsibilities, would have to invest time to upload information to the platform	Employees would have direct access to the website and be able to upload information immediately	P C I O	Positive Positive Negative Positive
Contract Service Provider w/ Full Support	Service provider would completely design and maintain the municipal website	If the city designs the website using the platform the initial cost is $35,000 for licensing and startup. Annual costs are $5,000	The service provider would both design and update the website. Municipal responsibility would be limited to the sending of updates and information to the service provider, so that the website could be updated	Employees may or may not have direct access to the website. Information would need to be transmitted to the service provider	P C I O	Positive Negative Positive Negative
Contract or Hire IT Professional	An in-house professional, by either contract or hire, would allow for local oversight and access. However, because of the small size of rural municipalities, it may be difficult to find or attract an IT professional for this role	Contract rates are not known; however, they are estimated to be similar to the salaried market rates for IT professionals	The IT professional would design the website with the city's assistance	The IT professional would update information under the municipality's direction (contractual or employment terms should specify the required time-frame for posting information)	P C I O	Negative Negative Positive Positive

* Service costs were obtained via internet website review or phone surveys of the city clerk's offices for 44 towns and villages. These include: Anna, Atlanta, Auburn, Aurora, Barry, Bloomingdale, Bradford, Cairo, Chatham, Collinsville, Cuba, Diamond, Decatur, Elgin, Evanston, Farmington, Galva, Glen Carbon, Grayville, Henry, Jacksonville, Jonesboro, Leland Grove, Marengo, Mechanicsburg, Minonk, Mahomet, Moline, Morrison, Mount Pulaski, Naperville, Normal, North Aurora, Oswego, Poplar Grove, Sesser, Shorewood, Springfield, Staunton, Troy, Wamac, White City, White Hall, Wyoming. Additional information was obtained from a review of 8 contract service providers (Revize, GovOffice, Just In Time Design, Town Web Design, Civic Plus, Weblinx, CreativeCore, Media by Marta).

Source: Author's original scorecard.

temporarily shifting duties from one employee to another, in order to allow for the required initial time investment for uploading information to the website. The community should consider appointing a temporary committee to determine the information that it wishes to display on the website, and to oversee the initial design. However, the municipality should caution against involving too many stakeholders in this process, since this can complicate and inhibit implementation (Schuytema, 2007).

Finding 2: One or two employees should be designated to oversee and maintain the municipal website.

There are numerous legally mandated posting requirements. These requirements are collectively displayed on Illinois Policy's website (Ruckman, 2014). It is important for the municipality to assign specific employees to review posting requirements periodically, in order to ensure compliance. In addition, employees who post to the website must clearly understand their roles regarding posting responsibility. For instance, the clerk might be responsible for posting the board agendas and meeting minutes, while the treasurer might be responsible for posting the audit report disclosure.

Finding 3: In order to avoid stagnancy, it is suggested that a committee evaluate the website annually.

A website with sparse out-of-date information or a community calendar without community events convey a very negative image of a community. Furthermore, when a website does not provide visitors with relevant and up-to-date information, the public will not use it, and therefore it becomes a poor investment for the community.

Finding 4: The municipality should develop a policy for web conduct.

This ensures that employees clearly understand the information that public officials wish to share on the municipal website, avoiding the potential for inappropriate or uninformed posts.

Best Practices

The goal of this section is to discuss common features of effective municipal websites in Illinois. Setting up and maintaining a website demands significant resources. Following some basic best practices can protect that investment. There are a number of different features that represent innovations for municipal website deployment. A clear pattern can be found in the analysis. Rural Municipalities that adopt structures establishing responsibility for civic engagement are followed by significant increases in interaction and website activity. Websites that contain specific links that target public stakeholders through education and feedback tend to promote more interaction and engagement. With the advent of modern social media platforms, these types of interactions are expected by citizens.

The best practices chosen here focus on those aspects of municipal websites that are visible to both public and private sector stakeholders.

1. Provide updated information for important events in the city: social media links, updated events, and archives of city council meeting minutes.
2. Allow stakeholders to access to municipal services online.
3. Provide economic development information. Examples include city notices, tax information, and key economic and demographic data.
4. Use of video, city notices, and links to city services when possible.
5. Consistently update the website.

Conclusion

Rural municipalities in Illinois can benefit from the social, economic, and political advantages of website implementation. E-government can save time and money by reducing paperwork and decreasing demand on municipal employees, since it makes information electronically accessible, thereby improving municipal performance (Schwester, 2009). Not only is community information accessible to residents 24/7, it is also available to visitors, future residents, and consumers. A web presence can also help promote economic development. Companies and startups may use a municipality's website as a means to investigate the community. To attract business, industry, or visitors, a community must market itself beyond its geographic boundaries. An Internet presence is an affordable means for a community to present itself to companies looking to expand. Additionally, citizens who do not attend local board meetings are able to track government activity by reviewing agendas, minutes, and voting records. There is a positive effect on citizens' perceptions of their local government's accessibility when they have visited the government's website.

References

Anthopoulos, L., Reddick, C.G., Giannakidou, I., & Mavridis, N. (2016). Why e-government projects fail? An analysis of the Healthcare.gov website. *Government Information Quarterly*, *33*(1), 161–173. http://dx.doi.org/10.1016/j.giq.2015.07.003

Cassell, M.K., & Mullaly, S. (2012). When smaller governments open the window: a study of web site creation, adoption, and presence among smaller local governments in northeast Ohio. *State and Local Government Review*, *44* (2), 91–100.

Cordella, A., & Iannacci, F. (2010). Information systems in the public sector: The e-Government enactment framework. *The Journal of Strategic Information Systems*, *19*(1), 52–66. http://dx.doi.org/10.1016/j.jsis.2010.01.001

Duncan, C.M. (2000). *Worlds apart: Why poverty persists in rural America*. Yale University Press.

Dunn, W.N. (2012). *Public policy analysis* (fifth ed.). Routledge.

Feeney, M.K., & Brown, A. (2017). Are small cities online? Content, ranking, and variation of US municipal websites. *Government Information Quarterly*, *34* (1), 62–74.

Holzer, M., Fudge, M., Shick, R., Stowers, G., & Manoharan, A. (2012). *U.S. municipalities e-governance survey (2010-11): An assessment and ranking of municipal websites.*

Johnson, R.A., & Walzer, N. (2005). *Illinois municipalities: changing conditions and policy responses*. Illinois Institute for Rural Affairs, Western Illinois University.

Lowenthal, P.R., Dunlap, J.C., & Stitson, P. (2016). Creating an intentional web presence: Strategies for every educational technology professional. *TechTrends*, *60* (4), 320–329, http://dx.doi.org/10.1007/s11528-016-0056-1

Layne, K., & Lee, J. (2001). Developing fully functional E-government: A four stage model. *Government information quarterly*, *18* (2), 122–136. http://dx.doi.org/10.1016/S0740-624X(01)00066-1

Moon, M.J., & Norris, D.F. (2005). Does managerial orientation matter? The adoption of reinventing government and e-government at the municipal level. *Information Systems Journal*, *15*(1), 43–60.

Moon, M.J. (2002). The evolution of e-government among municipalities: rhetoric or reality? *Public administration review*, *62*(4), 424–433.

Norris, D.F. (2009, November). E-government among American local governments: adoption, impacts, barriers and lessons learned. In: *The international conference for administrative development: towards excellence in public sector performance*. Riyadh, Saudi Arabia, 1–4.

Norris, D.F., & Reddick, C.G. (2013). Local e-government in the United States: Transformation or incremental change? *Public Administration Review*, *73*(1), 165–175, http://dx.doi.org/10.1111/j.1540-6210.2012.02647.x

Ruckman, M. (2014). Website posting requirements for local governments in Illinois. Retrieved 30 November, 2016 from http://www.illinoispolicy.org/policy-points/website-posting-requirements-for-local-governments-in-illinois/.

Schuytema, P. (2007). The need for a dynamic rural web presence. *Illinois Institute for Rural Affairs, 18* (6). Retrieved from http://www.iira.org/wp-content/uploads/2014/08/The-Need-for-a-Dynamic-Rural-Web-Presence.pdf.

Schwester, R. (2009). Examining the barriers to e-government adoption. *Electronic Journal of e-Government, 7*(1).

Scott, J.K. (2005). Assessing the quality of municipal government Web sites. *State & Local Government Review*, *37*(2), 151–165. http://dx.doi.org/10.1177/0160323X0503700206

Siegel, B., & Waxman, A. (2001). Third tier cities: Adjusting to the new economy. *Reviews of Economic Development Literature and Practice, 6*, 1–38.

Srivastava, S.K., & Ray, S. (2016). E-government Services Adoption and Interdependence: Granger Causality Analysis. *Journal of International Technology and Information Management*, *25*(3), 1.

Thomas, J.C., & Streib, G. (2003). The new face of government: Citizen-initiated contacts in the era of e-government. *Journal of Public Administration Research and Theory*, *13*(1), 83–102.

United States Department of Commerce, Bureau of Economic Analysis. (2016, December 12). *Bearfacts: GDP by State: GDP for Illinois.* Retrieved from https://bea.gov/regional/bearfacts/action.cfm?geoType=3&fips=17000&areatype=17000.

West, D.M. (2001). *Urban e-government: an assessment of city government websites*. Taubman Center for Public Policy, Brown University.

Wilkinson, R.G. (1999). *Unhealthy societies: The afflictions of inequality*. New York: Routledge.

The Role of Municipal Websites Within Rural Illinois Municipalities

Using data collected on 44 municipalities in the state of Illinois, in the United States, this paper examines the decision-making process that rural municipalities face relative to having a web presence. Although large local governments are more likely to have a website, many small local governments do not, due to perceived lack of both technical and capital resources. This study employs a cost benefit scorecard and finds that rural municipalities have affordable opportunities.

Tyrone Price Dooley is an Assistant Professor and Program Coordinator for the Master's Program in Public and Nonprofit Administration at the University of Memphis. Dr. Dooley received his Ph.D. in Public Policy from the University of Arkansas and was a Center for Online Learning Research and Service Faculty Fellow, a former Southern Regional Education Board Doctoral Fellow, and a Benjamin Lever Doctoral Fellow. His research interests focus on areas related to education policy, technology, at-risk populations, and human capital development. Dr. Dooley's research has been featured in the Journal of Youth & Society, e-mentor and the London School of Economics Public Policy Blog. He is an active member of the American Society for Public Administration; the Network of Schools of Public Policy, Affairs, and Administration, and the American Political Science Association. Dr. Dooley has designed and developed community engagement symposiums. He has served on various academic committees and has taken part in the development of new academic programs. Dr. Dooley enjoys spending time with his wife Tess and his son, David.

WE RECOMMEND

OLC Innovate 2018: Education Reimagined, April 18–20 2018, Nashville, USA

OLC Innovate conference has been designed to bring forward-thinking leaders together to create new innovations for higher education. The participants of the conference in Nashville will challenge contemporary teaching and learning paradigms, reimagine the learning experience, and ideate on how disruptions in education today will shape the innovative classroom of tomorrow.
More information: **https://onlinelearningconsortium.org/attend-2018/innovate/**