Understanding the Organizational Dynamics Influencing the Take Up of Innovations

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Abstract:

Existing research points to a host of antecedents that can spur or slow uptake of new ideas, including features of the innovation (Rogers 2003), environmental factors (e.g. Sørensen and Torfing 2011), and individual factors (e.g. Shea and Belden 2016). In this paper, we draw upon a number of projects in which an external intermediary organization has supported the diffusion of new products designed to improve the implementation of public policy or provide novel solutions to social problems. We analyze the practice and propose a more complete model to capture the diffusion of these products within service organizations. We assert that innovation taps a social process that is influenced by both exogenous and endogenous human and structural factors – leadership, motivation, resources, rules, among other things – that interact with each other in significant ways. Further, we argue that these factors are influenced by the nature of the exogenous resources provided to the organization by an intermediary agency focused upon offering this support. We provide illustrations of this process from three separate technical innovations into public and nonprofit human service organizations: an app for TANF recipients; an integrated services assessment tool, and an online product to help people access financial supports. By exploring how the technical ideas and organizational conditions interact, we are building better understandings of how to legitimate and support the take-up of new ideas.

For years, policy makers have tried to promote the replication of good ideas in other contexts.

Existing research points to a host of antecedents that can spur or slow the uptake of new ideas,

including features of the innovation (Rogers 2003), environmental factors (e.g. Sørensen

&Torfing, 2011), and individual factors (e.g. Shea & Belden 2016). While a lot has been written

about the spread of innovation in private industry, there is much less systematic scholarship

about how innovations spread in the social sector. This is especially true for social policy

innovations introduced into complex institutional environments in which government and

private organizations must coordinate resources and actions (Sandfort, et al. forthcoming).

As an intermediary supporting the effective implementation of human services policy,

the Future Services Institute at the University of Minnesota has been involved in developing,

implementing and supporting a number of innovations in recent years. In this work, we have

been struck by a disconnect between how policy scholars write about the process of supporting

innovation, often as the replications of evidence-based models with fidelity, and what it seems

to take on the ground (Sandfort and Moulton, forthcoming). This seems to be because recent

scholarship, such as implementation science, focuses upon how to guarantee replication of

programmatic ideas that have been documented as impactful, a technical issue that requires

instrumental adaptation of a fully formed model. In our work, we see innovation as much

broader, as encompassing efforts that individuals and organizations make to incrementally

improve their own practice or organizational operations.

In this paper, we draw upon a number of projects in which an external intermediary

organization has supported the diffusion of new products designed to improve the

implementation of public policy or provide novel solutions to social problems. We analyze the

practice and propose a more complete model to capture the diffusion of these products within service organizations. We assert that innovation taps a social process that is influenced by both exogenous and endogenous human and structural factors – leadership, motivation, resources, rules, among other things – that interact with each other in significant ways. Here we explore an organization's endogenous conditions through two main factors: (1) human agency, including leadership, motivation, and trust, and (2) organizational structure, including rules, routines, culture, and resources. Further, we argue that these factors are influenced by the nature of the exogenous resources provided to the organization by an intermediary agency focused upon offering this support. We provide illustrations of this process from three separate technical innovations into public and nonprofit human service organizations: an app for TANF recipients; an integrated services assessment tool; and an online product to help people access financial supports. By exploring how the technical ideas and organizational conditions interact, we are building better understandings of how to legitimate and support the take-up of new ideas.

Current Understanding of Innovation

Innovation as both result and process

Innovation is both a process and a result.   In private businesses, a central concern is how to shepherd a unique idea (invention) into wide scale market product (innovation). In that conception, innovation is often defined as a new idea or initiative that 'works' in a particular setting (Mulgan & Albury, 2003). The process that supports the creation of an innovation is

contingent upon a firm's knowledge, networks, capacities, skills, and resources (Fagerberg, 2006; Lam, 2009; Pavitt, 2006). It has been investigated with different units of analysis and theoretical orientations (Fagerberg, 2006; Lam, 2009; Pavitt, 2006; Perri, 1993).

Public or social innovation is driven by a need to grapple with complex, 'wicked' problems, as well as shifting and increasing citizen expectations, amidst new levels of political and economic insecurity (Ansell and Torfing, 2014; Moulton, et al 2019). Public managers regularly develop new ideas, projects, and initiatives to improve public service provision (Osborne, et al 2012; Torfing, 2016). While the ability to innovate is similarly shaped by the knowledge, capacities, skills and other resources, there is often more need to engage across organizational boundaries to garner what is needed.

Seen, then, as a result, an innovation is anything understood as new to people within a particular organizational or network context. To create such a result, the process of implementing innovation requires challenging what already exists, disrupting established practices and routines (Ansell and Torfing 2014; Bason, 2018; Bessant, 2005; Van de Ven et al. 2008; Poole, 2004). To accomplish these aims requires purposive management and influx of new resources – ideas, tools, and training – as well as the ability to assess whether or not the new idea is adopted by the organization and integrated into current operational procedures. It is well documented, for example, that actors often encounter institutional inertia that slows down adoption or shapes what is actually viable (Fagerberg, 2006; Lam, 2009).

Conceptually, it is useful to distinguish between administrative and technological innovations (Moulton, et al, 2019; Damanpour, 1991; 1987). Administrative (or managerial)

innovation can be defined as "the generation and implementation of a management practice, process, structure, or technique that is new…and is intended to further organizational goals" (Birkinshaw, Hamel, and Mol 2008, p. 829). Such innovations focus upon increasing the structure and efficiency of the internal operations of an organization. In contrast, technological innovations are directly related to the primary work of the organization and result in changes to the public services offered to the end user (Damanpour, Walker, and Avellaneda, 2009; Osborne, et al 2012). Rather than focusing upon internal operations, these innovations improve the public value delivered to the people who are receiving the public services.

Within both types, previous research also distinguishes between the intensity of the change process that accompanies the introduction of the innovation (Tushman & Anderson, 1986). "Competence enhancing" innovations require small changes that easily fit into existing routines and capabilities, and incrementally increase organizational productivity. On the contrary, "competence destroying" innovations force organizations to restructure their skills and routines radically. This distinction tries to help create understanding about the change process, which innovation scholars have historically broken down into two major phases: (1) consideration of an idea that is new to the context, and (2) adoption, including the development, implementation and integration of the new idea into practice (Ansell & Torfing 2014; Damanpour 1991; Damanpour and Schneider 2009; Wolfe, 1994).

Rogers (2003) is recognized for classical studies of innovation diffusion, defined as "the process by which an innovation is communicated through certain channels over time among the members of a social system. It is a special type of communication, in that the messages are concerned with new ideas" (p. 5). Helpfully, Rogers identifies both categories of adopters - early

adopters, early majority, late majority, laggards - and stages of adoption and diffusion - awareness, decision to adopt (or reject), initial use and continued use. Kaminski (2011) notes that the goal of classifying the diffusion process is not to move organizations or entities from one category into another but rather to "streamline the innovation so it meets the needs of all the categories." When researchers plot the cumulative adoption of an innovation in a market, there is typically reveals an S-shaped curve, reflecting dynamics among heterogeneous consumers' network thresholds, risk benefit ratios, resistance to adoption, and rates of critical mass formation and contagion (Knoke, 2019). These nuances suggest not every organization is equally likely to adopt an innovation and that the innovation adoption process itself is multi-layered.

However, in practice, the adoption process is often even more complex and nonlinear, difficult to predict or control (Pavitt, 2009; Torfing, 2016; Van de Ven et al., 2008; Poole, et al 2004). As people begin to make change, they are required to question their existing assumptions, often altering their understanding of the original problem and its potential solutions. This type of double-loop learning (Argyris & Schon, 1996) is part of what accompanies changes in organizational routines that alter understanding and awareness (Van de Ven et al., 2008). Threshold models of collective behavior similarly place an emphasis on human agency, important in understanding how innovations are perceived when first introduced into organizations (Valente, 1996). These models postulate that an individual engages in a behavior based on the proportion of people in the social system already engaged in the behavior (Granovetter, 1978). An individual's adoption of a new behavior is thus a function of the behavior of others in the group or system. Some individuals have low thresholds

and thus engage in collective behavior before many others do, while individuals with high thresholds do so only after most of the group has engaged in the collective behavior. This variation is important to recognize in field settings, when group dynamics around the introduction of a new idea often hinge upon interpersonal dynamics, personality, and authority.

In the work described here, we stress the significance of attending to this context to shape the tactics used to design and influence the change process. Rather than assuming an innovation will either support or challenge existing competence, it is important to analyze dynamics within the organization, leveraging current structures and leadership to embed the new idea through the purposive and strategic choice of resources. In fact, the literature around organizational readiness and the role of innovation support provides a starting point for the development of a new conceptual model.

Organizational readiness, capacity and culture for innovation or change

When introducing a new idea into a new context, the availability (or lack thereof) of organizational resources – funds, human talent, infrastructure – can help (or hinder) successful implementation. Weiner et al (2008) conclude that organizational readiness includes aspects of both "motivation" and "capability" – that is, both the willingness and ability to do something. However, as scholars have recognized, it is not necessarily the absolute or fixed resources that matter as much as staff perceptions or organizational usage of these resources. As Sandfort and Moulton (forthcoming) state, "resources are not exogenous to the system, but are themselves shaped by actors operating in the system." Weiner (2009) similarly argues that readiness for change is a psychological assessment of available resources. He introduces the concept "change

efficacy" where efficacy is a comprehensive summary or judgment of perceived capability to perform a task" (Gist and Michell, 1992: 184). The questions for staff then become "do we know what it will take to implement this change effectively; do we have the resources to implement this change effectively; and can we implement this change effectively given the situation we currently face?" (Weiner, 2009).

Similarly, leadership commitment, for instance in the form of consistent messaging, can impact the success of innovation adoption (Weiner, 2009). In a study of the take up of a design-based approach to implementation, Bason (2018) introduces four roles for leaders, from the politician ("The Visionary") to the top executive ("The Enabler"), the mid-level manager ("360 Degree Innovator") to the institution head ("Knowledge Engineer"). This typology suggests leaders throughout an organization are important for understanding the processes of innovation adoption and implementation.

Researchers have developed, tested, and applied a number of instruments to measure different aspects of organizational readiness (Weiner, Amik & Lee, 2008; Holt, Helfrich & Hall, 2009). While scholars debate the validity and reliability of these instruments and offer criticism around their focus on either individual or organizational factors (Weiner, et al 2008), many tools are developed for a specific context (e.g. measuring organizational readiness in an e-commerce adoption scenario). The literature also attempts to distinguish between "readiness", "capacity" and "culture/climate." While it seems intuitively appropriate to try and make this distinction, there appears to be significant overlap in ways the constructs around "readiness" and "culture/climate" are measured.

In our own work, we have made a conscious decision to not use any of these existing (validated) tools and instruments. In large part, this is because of the contexts here differs significantly – all technological innovations are applied in public and nonprofit organizations implementing social programs to people living with low-incomes. The existing scales also focus upon ideas of *predicting* how an innovation will be adopted and applied, without attending to how to influence that context. In our work, we are applying a design-based approach to working within complex systems; we regularly seek to intervene in social settings to improve the likelihood of successful adoption of an innovation. Our experience implementing and disseminating the three innovations offer a different perspective: one that emphasizes the importance of context, the role of emergence (as opposed to predictability) as well as the influence of implementation support in how and to what extent the innovation are adopted and utilized.

Innovation support

The literature on innovation and change recognizes the potential importance of third-party actors in introducing an innovation in a new context, facilitating the transfer of knowledge, providing technical assistance, and shepherding organizational efforts needed for implementation. These actors have been described as intermediaries, brokers, purveyors, change agents, and middlemen (Howells, 2006;). For instance, Rogers (2003) discusses how "change agents" can influence opinion leaders within organizations to shape decision making around the uptake of a new idea. In Rogers' framework, the "change agents" are not neutral and success of the innovation is tied to their own organization's success. These actors often are purveyors of the particular evidenced-based practice or model, who have a tangible stake in the

diffusion and replication of a particular innovation. In the three projects described below, the Future Services Institute – an applied research and training organization within the University of Minnesota – serves as an intermediary, a change agent. But our work is focused upon public-value creation, making improvements in public service organizations so they can better serve their target groups, families seeking support because they are financially insecure. The innovations we help diffuse were conceived and co-designed with professionals in the field. We value and support any innovation that leads to creating more public value (Bryson, et al, 2014).   We see our role is intrinsically linked to supporting innovation in these contexts.

Research Context & Methodology

As an intermediary working in human services policy fields, the Future Services Institute at the University of Minnesota is involved in developing, implementing and supporting a number of innovations. In this paper, we analyze three, where we are working with county governments and nonprofit organizations to support integration of a new program technology into their agency and operating procedures: a web-application for the state's TANF program to ease implementation, the MFIP Connect; a frontline family assessment tool that helps public and nonprofit workers engage parents around the needs of their whole family, the Integrated Services Assessment Tool (ISAT); and a financial product for the unbanked and underbanked called Financial Access in Reach (FAIR). Formal program evaluations are being conducted about all three technological innovations but in this paper we are focused on a different analysis. Our methodology here examines the support offered as we worked with other agencies to share the innovation and apply it in their setting; this approach is directly influenced by a theory of

structuration that illuminates the interplay of human agency with structural resources and constraints (Sandfort, 2010).

MFIP Connect is a web-application designed to decrease the administrative burden experienced by program participants in Minnesota's cash assistance program (Minnesota Family Investment Program - MFIP). Administrative complexity and challenging relationships between government and nonprofit service providers have long plagued implementation of welfare and welfare-to-work programs (Brodkin & Marston, 2013; Sandfort, 1999; Soss, 1999). Minnesota state government contracted with the Future Services Institute to lead a design process for the innovation, develop prototypes, and – after extensive testing and adjustment – create a pilot initiative using the web-app in county governments and their nonprofit employment training partners. The app was launched in May 2017 and, as of October 2019, is used in seven counties[1] across the state where welfare-programming is administered. The tool has features that decrease participant stress around submitting documents on time, providing an alternative to coming in to an agency to deliver paperwork in order to receive benefits; it enables close communication between the participant and their case workers thus shifting the often impersonal nature of interactions in the 'people processing' technology of welfare provision (Hasenfeld, 1983). It also offers more holistic support via tools that encourage budgeting and financial planning and connects participants to other resources within their community.

The Integrated Services Assessment Tool (ISAT) was developed in partnership with local government and nonprofit service providers to enable them to have a systematic way of

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[1] This includes a Southwest Health and Human Services Consortium, which is a multi-county agency providing services to families residing within the 6-county jurisdiction.

engaging families around a range of needs. Current policy and programs mandate narrow assessments for accountability and public program eligibility criteria. Used instrumentally, this paperwork pulls frontline caseworkers away from their important roles in engaging parents, understanding the challenges that they face, and seeing the whole picture of their family needs and dynamics. To more effectively implement a 2-generational approach to poverty reduction (Chase-Lansdale and Brooks-Gunn, 2014), an innovation was needed. The Future Services Institute worked in one community for 18 months using a human-centered design process to develop, and test through various prototypes and field trials, a tool that could support the holistic engagement of and trust building with parents. We then worked with three non-profit, multi-service organizations on bringing the innovation into their own organizations; while each had a commitment to engaging whole families, their operations, program mixes, and historical context varied widely.

Finally, Financial Access in Reach (FAIR) is a financial product designed and tested by Prepare + Prosper – a statewide nonprofit based in Minnesota. FAIR's goal is to serve the unbanked and the underbanked by providing virtual access to services such as a checking account with no overdraft fees, a savings account, and a credit builder product that involves minimum payments ($30) to build a better credit history. Developed by an organization who provides free tax preparation to allow those living with low-incomes access the national Earned Income Tax Credit and other state tax benefits, FAIR reaches a population previously left out of the mainstream banking system. Its goal is to interrupt the vicious cycle set in motion by poverty, lack of financial resources, poor credit and lack of access to the banking system. Formally launched as a pilot in December 2016, FAIR was introduced into other organizations in

spring 2019. It is currently being offered in four local nonprofits in the Twin Cities which all focus on building economic stability for families with low-incomes.

Each case is a technological innovation, focused upon trying to affect the core programs being implemented within service organizations, both local governments and nonprofits. MFIP Connect and FAIR are information technology tools, innovations leveraging the availability of improved access to information-sharing capabilities in mobile phones now widely accessible to most Americans. ISAT is focused upon changing the service experience of families, enabling public and private organizations to identify need, respond more holistically, and track families engagement in their programs over time. As such, it stimulates changes in the organizations that also have implications for overall management of the organizations frontline staff, including the allocation of staffing resources, and supervision. All three are products designed to improve public policy implementation and respond to specific service delivery problems.

To support the take up of new innovations, our methodology often begins with a conventional organizational assessment: conversations with leaders to gauge the organization's current conditions and interest, including staff motivation to work with something new, current monetary and physical resources, as well as the organization's structure and conventional practices. Our staff document these conversations in a structured observation tool. This information helps shape the methodology we then deploy for working with the organization to introduce and embed the innovation. For instance, during early conversations with one organization's leaders around the ISAT, it became clear that interest varied. While some leaders were clearly eager to try something new, others were skeptical about introducing yet another assessment tool into the work of program staff and families'

lives. This was a clear message to us that these concerns had to be heard and given space in future conversations. We also consciously developed a video about the tool's development that featured the frontline staff involved to help 'tell the story' and gain legitimacy from other similarly situated staff members in other organizations.

This example points to another important component of our methodology: As we think about and shape the customized approach, it is important to build trust between the Future Services Institute and *all* levels within an organization – with all leader types, in Rogers' terms – that has expressed interest in the programmatic innovation. Without it, resources we introduce, for instance training, support documents, or technical assistance, are not used by the organization to support take up of the innovation, and worse, can turn out to be ineffective or, even worse, counterproductive to the process. This initial work is important in understanding how to introduce exogenous resources into the organization when it's ready to explore, and potentially adopt and implement, an innovation. This is a lengthy and dynamic process; however, it is not until this process has done 'enough' work that an innovation is actually embedded in standard operating procedures.

In this paper, we have integrated data from the structure observation tools, interviews with staff providing innovation support, and notes from meetings in which staff reflect upon and refine their practices of supporting innovation. We have inductively developed a model to represent the practice of innovation support and summarized key elements in analytical tables presented below. In future revisions to the paper, we plan to add more information about ultimate outcomes from this innovation support, including changes to the organization and data about the families impacted by use of these technological innovation.

Conceptual Model for Innovation Implementation Support

Our literature review, initial review of our structured observations, and analysis of meeting notes enables us to begin to articulate a framework that provides a more complete understanding of innovation adoption and mechanisms that create results in public service adoption. We consider a variety of results that can be influenced when a new innovation is introduced, such as change in the target population, a change in the organization or program (Moulton and Sandfort, 2017). However, to get to these results, the framework draws our attention to the process of introducing and implementing the new idea. In this process, both the structures within organizations and human agency in altering those structures are deterministic, fueled by exogenous resources introduced through innovation support activities. Third party organizations often play a part of implementing innovations, by both introducing the ideas, providing support in the stage of exploration, or helping guide the implementation process itself – what we refer to as implementation support (see Figure 1).

This implementation support model pushes against conventional approaches and assumptions of 'technical assistance.' The terminology itself stresses the objective, mechanical operation of help. Technical assistance is something that it 'done to' organizations, where technical knowledge is developed by a third party and applied in a routinized way, through webinars, white papers, trainings. This practice often stresses the development and deployment of tangible resources – e.g. tools and documents – that are easy to count and codify in the contracts governments or foundations make with such technical assistance providers. Intangible resources, such as well-hosted meetings focused upon group learning or

creating space for reflection, often are under emphasized. Technical assistance does not focus on the organizational context where an innovation is being introduced but rather the application of tangible resources ostensibly designed to support the take up of the new idea.

The model introduced here draws attention to the potential significance of both tangible and intangible resources operating as exogenous forces when a new innovation is being introduced. More importantly, though, implementation support analyzes the operation of the organization where the innovation is being introduced. Figure one illustrates how these organizational conditions can be understood in terms of the interplay between structure and human agency. Building upon existing scholarship (Sandfort and Moulton, forthcoming), we see the forces structuring organization as rules, routines, and resources. Rules are shared understanding of what is required or permitted in a social setting (Ostrom, 2011); rules can be tangible such as policy manuals or legislation, or they can be intangible and communicated through cultural values and norms. Routines are the repetitive patterns of action that involving coordinating the actions of individuals and groups; they provide connection between activities and help people feel part of the collective through activities such as hiring, budgeting, and performance assessment. Finally, organizations are structured by their resources – the human talent, financial resources, the location of offices, and equipment used to get the job done. Rules, routines, and resources are made significant by how the human beings inside the organization bring them into use. In our work, we particularly see the significance of leadership in providing framing of the innovation opportunity, of developing trust with members of the organization that emerges from authentic conversations about the share work at hand, and motivation developed for working with the new idea.

Sociologists and organizational scientists refer to this interplay between structural factors – the rules, routine, and resources – and human sense making and action in relation to them as the structuration of social systems (Fligstein and McAdam, 2012; Giddens, 1984; March and Zhou, 2000; Orlikowski, 1992; Sewell, 1992). It is fundamental to understanding social dynamics in the world. Importantly for our concern about the diffusion of innovation, these dynamics are endogenous to the organization, created as people go about their day-to-day work in carrying out the programs and services provided by the agency.

Figure 1. Conceptual Model of Innovation Implementation Support
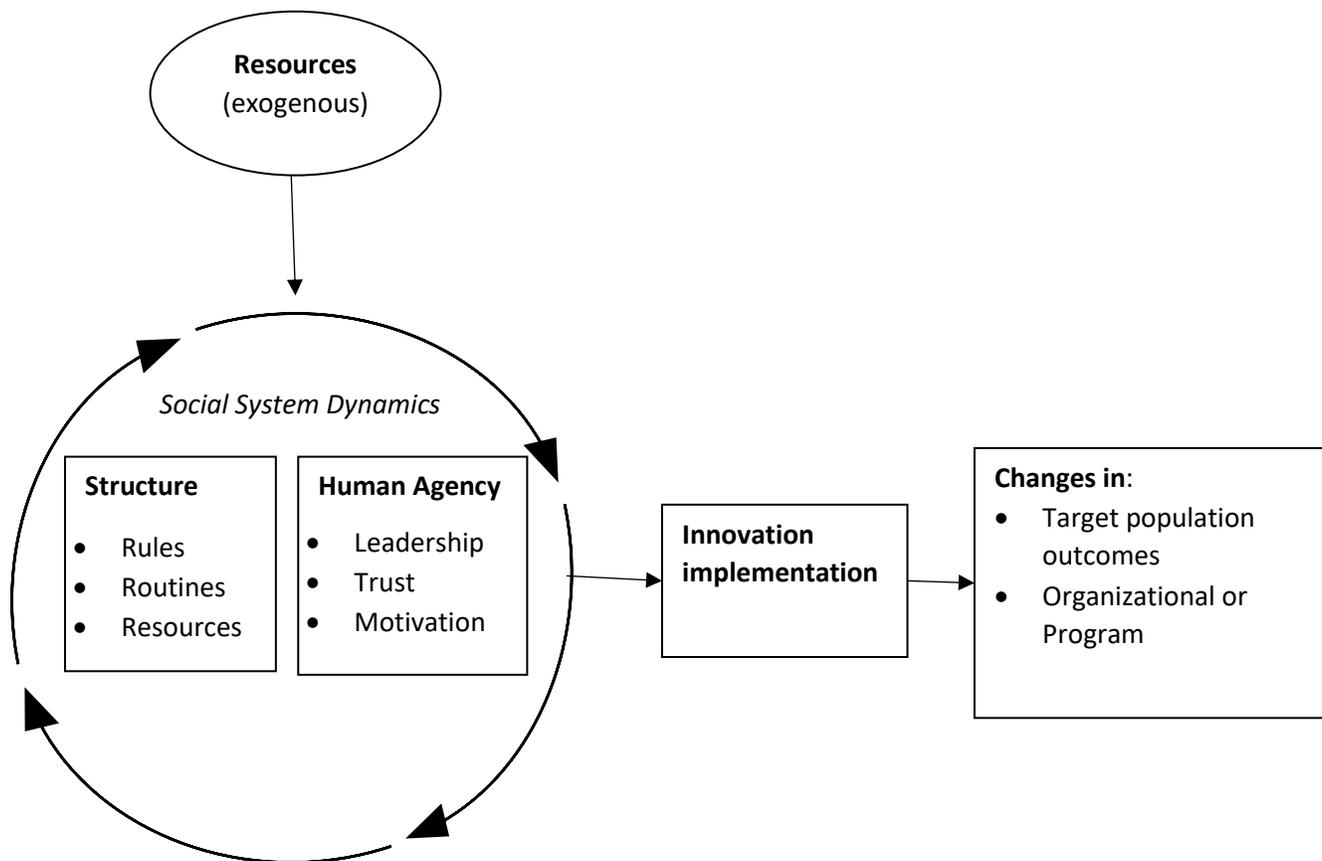
Our analysis suggests that this model has significant implications for efforts to scale innovations. It helps us move beyond ideas of 'technical assistance' and, instead, recognize that as exogenous resources are introduced into organizations, they interact with the ongoing structuration of organizational life. Thus, the social dynamics of change are important to understand if we are to support the take up and spread of new ideas. Let's turn now to data from the three cases underlying this analysis.

Inductive Case Analysis

The implementation support model was developed through an iterative process of doing the practice of innovation support and engaging with theoretical ideas. In this regard, we believe the model helps to bring intentionality to practice. We will turn to each case to illustrate.

As noted earlier, one innovation support project involved the introduction of a web-application into local units of government. The technical innovation was originally developed from a design process that engaged a broad array of stakeholders and three local organizations to develop the idea and prototype it. Starting in 2017, the state government provided resources to help scale the pilot program and continue to improve the technical core. The Future Services Institute managed the contract with the web-developer and led the innovation support of the project. (See Table One for illustration)

As might be expected, the Future Services Institute developed an array of implementation resources to support basic understanding of the innovation: slide decks explaining the basic elements; brochures and poster that could be used in local offices; a video

describing the project and the communication problem it was trying to solve.   User guides were created to walk people through the use of the administrative screens that would be visible from their desks to help manage the full case load. In this case, the innovation focused upon improving communication between public sector organizations that determine eligibility for public programs and issue cash assistance, and nonprofit organizations supporting program participants in looking for work. As such, training in using these resources and the app itself needed to involve managers and staff from both types of organizations in each local site. Training was developed to introduce staff to the operational realities of the innovation, show-casing the administrative platform and walking staff through using the app. To assure active learning, the Future Services Institute team built out scenarios to help staff understand how to carry out common tasks, such as recruitment conversations with clients and responding to virtual requests. We also requested the developer develop and share a 'sandbox' environment that allowed them to practice using the tool and its interface.

These marketing materials, user guides and trainings resources were received differently in various organizations – sometimes managers were excited about the innovation and brought that enthusiasm to the training sessions; other times, the decision to use the app had been made by more senior leaders and those in the room came with more resistance and pointed questions. Sometimes there was a positive history and strong working relationship between the public and nonprofit organizations, while other times this relationship was strained and felt in the enthusiasm staff brought to working together on the innovation. To overcome some of these barriers, the Future Services Institute staff had some additional resources to use to support innovation take-up

In routine-bound public agencies, current operational practices often define what staff believe is possible. To help unpack the current operations and work with staff to find appropriate moments to introduction of the app tool, the innovation support team facilitated conversations with staff and managers to develop a current program process flow (Sandfort and Moulton, 2015). The resulting visual operational flow charts helped to identify optimal places where the technological innovation could be introduced, as well as document for all where necessary adjustments could be made to existing processes.   As a process tool, this resource helped focus attention on the operational dimensions of using the app and generated a list of questions that needed to be resolved. It also helped uncover structures in particular organizations that managers needed to alter to implement the app, such as allocations of staff time or routine communication processes between the public sector office and nonprofit contractor.

As an intermediary organization, the Future Services Institute also created other resources focused upon enhancing each organization's experience of the innovation. The staff structured check in phone calls and virtual meet-ups with sites to respond to question, trouble-shoot technical challenges, and gather feedback. A formal process evaluation was conducted, to collect data through interviews, focus groups, and administrative data analysis about actual use of the innovation.   In spite of these resources designed to support implementation, organizations varied in their engagement with regular meetings and data collection for the evaluation. Those that did not participate consistently experienced slower integration of the innovation into their operations.

In many regards, the process of innovation support was similar for the other two technological innovations. Table 2 summarizes key elements in the support for the Integrated Services Assessment Tools (ISAT). As noted earlier, this innovation provides frontline social workers a more holistic tool for engaging families, exploring their concerns and strengths, and building viable approaches for support when times get tough.

TABLE ONE: ANALYSIS OF INNOVATION SUPPORT IN MFIP CONNECT (APP FOR WELFARE RECIPIENTS)

Exogenous Resources Developed and Introduced	Endogenous Dynamics	Site-level variation	Initial Outcomes
Basic, tangible resources: 1. *Marketing material*: ranged from brochures and posters to a multimedia video 2. *User guides* for staff and participants	Allowed the sites to introduce and publicize the tool and generate participant interest. The user guides offered support for staff and participants in navigating a new interface and tool after the training occurred.	Site level as well as individual staff-level variation was common for this category. For instance, in one location, staff used the multimedia video during one-on-one participant enrollment; in other sites, the video was shown to participants during orientation.	• Alleviated staff burden to create promotional materials/user guides • Generated participant and staff buy-in and interest in using the tool
Formal training Done at least two levels (sometimes more) with all organizations involved in program implementation at the local site: 1. Managers 2. Direct service staff	Influenced buy in, trust and motivation to use the tool. It also enabled inter-agency dialogue and collaboration essential for implementation Designed to simulate the realities of using the tool, and refresh staff knowledge and skills. The use of a sandbox environment minimized the need for the Future Services Institute to hold responsibility for re-training new staff, as it could be done by peers.	Each site engaged differently with the training. There were variations in terms of the number of trainings offered, the audience engaged, etc. (mostly driven by demands and needs of the sites). More substantially, there was variation in how receptive staff were to the innovation.	• Generated buy in and initial energy for implementation • Provided the training team with more information about organizational motivation and capacity that informed future engagement • Generated questions/areas that needed troubleshooting

Program process flow analysis:	Assessment at each site to both	This enabled practical	• Alleviated organizational
Examine current operations to determine desired point to introduce MFIP Connect to clients and consider when it could provide staff with necessary information	understand existing business processes around delivery of MFIP services and brainstorm ways to introduce and integrate the app. This collaborative effort created a program process flow map. It provided important attention to the operational realities of starting to use app with client population.	questions about timing and scale to be decided by implementers, sometimes in a group, sometimes by program managers. Other factors such as leadership and staff motivation, existing resources, inter-agency trust and relationships influenced pace of operational changes	burden to plan/implement integration of the tool on their own • Minimized the time between introduction of the tool and adoption and use by participants • Generated alternatives and examples that could be used at other sites
Continuous quality improvement and evaluation Meetings with and between sites, and formal data collected for a process evaluation	Enabled problem solving around integration challenges. Gathered participant and staff feedback and offered customized support where necessary. Captured learning around tool integration, as well as staff and participant feedback around using the App.	Sites varied in their commitment and availability to participate in these check in meetings. While some sites were more involved, others struggled to participate, consistently resulting in slower integration.	• Provided space for leaders and staff to discuss the realities of integrating the tool into their existing routines • Provided space for co-creating solutions to challenges which generated additional buy in and trust

TABLE TWO: ANALYSIS OF INNOVATION SUPPORT IN INTEGRATED SERVICES ASSESSMENT TOOL (ISAT)

Exogenous Resources Developed and Introduced	Endogenous Dynamics	Site level variations	Outcomes
Basic, tangible resources: 1. *A 'travel kit' for scaling*: including the assessment tool, descriptive brochure, a 2-pager on the development of the ISAT, and a video 2. *Training guide* for staff and participants	Allowed the sites to get a (quite literal) feel for the innovation and to get a sense of why and how it was developed. The video allowed them to hear the voices of the developers as well as frontline staff already using the tool. The guide offers additional information to support use of the innovation	Site level variation was common for this category of resources. For instance, in some sites, the training guide led to extensive debates about how to measure domains in the assessment tool (e.g. family income). At other sites, staff listened and absorbed information during the introduction of these resources.	• Generated staff buy-in and interest • Alleviated staff burden to create promotional materials/user guides
Formal training Done with multiple levels in the organization 1. Managers and supervisors 2. Direct service staff	Training sought to secure buy-in, trust and motivation to use the tool. It also enabled inter-agency dialogue critical for readying agency for implementation The content and activities of the training were carefully designed to simulate innovation use, including how the tool might work in different programs, with different families.	While the training materials and activities were consistent throughout all sites, each site engaged differently with the training. There were variations in terms of the number of trainings offered, the audience engaged, etc. (mostly driven by demands and needs of the sites)	• Generated buy in and initial energy • Identified areas that needed troubleshooting

As with the app, basic, tangible resources and trainings were created to introduce the tool into new organizations – the colorful ISAT booklet, which enables a place to record notes and asks parents for their own assessment of their lives; a video that shares the excitement from other frontline staff working using the tool; and a brochure that can be shared with parents. Training provided opportunities for simulation, question and answers, and discussions about working with diverse populations. In some places, where senior managers had made a firm commitment to using the tool as part of a larger initiative, the resources and training was all that was required; the organization quickly adopted the innovation. When staff encountered barriers in use, they tried to trouble-shoot because of their perceptions that the format was established and couldn't be modified. In another organization, program managers went to extensive lengths to engage the frontline staff, ask for their input, and suggest modifications before a final decision was made to adopt the innovation.

In all of these cases, the process of adopting the innovation in a new organization is not linear. While senior leaders might be interested in the tool, supervisors and frontline staff have their own interpretations and assessment about how an innovation may work in practice. They also sometimes understand how the innovation challenges existing rules and routines, and might be resistant to making the change unless they understand how the benefits outweigh the costs. In fact, navigating the endogenous dynamics in a particular organization is a critical skill for those providing innovation support. When facilitators discover resistant staff or skeptical supervisors, operational rule or routines that block effective integration, they must think strategically about how to respond. Sometimes it is a focused conversation with supervisors. Sometimes it is a participatory brainstorming session about problem solving. Oftentimes it is a

search for identifying assets within the organization that can be aligned with or applied to using

the new resources being introduced to allow the innovation to be embedded in the operational

procedures of the organization. But that process takes time, and patience, and can only be

achieved through trusting relationships with implementers.

In the third innovation, FAIR, the Future Services Institute played a different role,

providing less direct support of take-up of the innovation and, instead, was solidly in an

evaluator. FAIR's development and implementation was led by a nonprofit (Prepare + Prosper);

however, that agency also provided similar basic, tangible resources, such as marketing

materials and training. However, some of the resources were less exploratory and more

directive. While the Future Services Institute offered a sandbox environment to allow counties

and nonprofits to test the tools, the Prepare + Prosper team developed a detailed "playbook"

describing the steps to be followed during enrollment of participants. In part, this particular

innovation was in a more competitive environment. The innovation partner, a private bank,

was profit-oriented and there were multiple other similar products that now exist. What

differentiated FAIR from the other innovations was trust in the implementation support

organization from the organizations implementing the innovative tool. The organizations'

experiences providing free tax preparation and other financial supports to people earning

limited income was a resource valued by leaders in implementing organizations.

Conclusion

In this paper, we sought to analyze practices involved in supporting take up of technical

innovations to articulate how resources interact with individual organizational dynamics in

process of innovation diffusion. While the three cases were focused on changing program

technologies, there are clearly some significant differences between them. MFIP Connect and

ISAT were introduced into public and nonprofit organizations, as parts of efforts to improve

public service provision. Some of the structures in implementing organizations arose from the

accumulated practices of bureaucratic processes and policy interpretation that are part of the

fabric of county and state governments. FAIR was introduced into nonprofit organizations

already involved in providing financial services to individuals with low incomes in the Twin

Cities metro area. While their leaders often want to offer a range of financial services, they are

often financially constrained by limited operating reserves.

Across these cases, though, it is clear that it takes intentional strategy to introduce

appropriate resources into organizations interested in adopting and embedding programmatic

innovations. This is far from what is evoked by discussions of 'technical assistance' that

emphasize transactional provision of information to support innovation. At the start of this

project, we could see that organizational factors (e.g. leadership, resources, capacity,

organizational culture) were likely to influence how and to what extent innovations were being

taken up and utilized. We began to document that variation. But our Future Services Institute

colleagues also started to respond to it, seeking to create more appropriate resources given the

organizational challenges our partners faced when grappling with the changes that would come

from using the program innovations. We now know that organizational characteristics do not

determine the diffusion of innovation in the social services sector. Rather these conditions –

and the people within organizations who create them – are the petri dish into which those

providing innovation support must seek to introduce appropriate resources to support the

change. In subsequent versions of this paper, we will provide more detailed data about each

case and the outcomes we see in the adopting organizations over time.

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