



Intellyx White Paper

ITinvolve: Driving Business Agility with Metadata Management and Curation

Jason Bloomberg

July 24, 2014

Balancing Automation and Human Knowledge Curation

There are many metadata management tools on the market today, including Configuration Management Databases (CMDBs) and Service-Oriented Architecture (SOA) Repositories, to name a few. Such tools seek to automate the collection and dissemination of policy-related metadata in hopes of automating policy enforcement – an important part of the automated governance critical to achieving business agility. And yet, such tools have generally fallen short, because they inadequately address the need to support policies that apply primarily to human behavior.

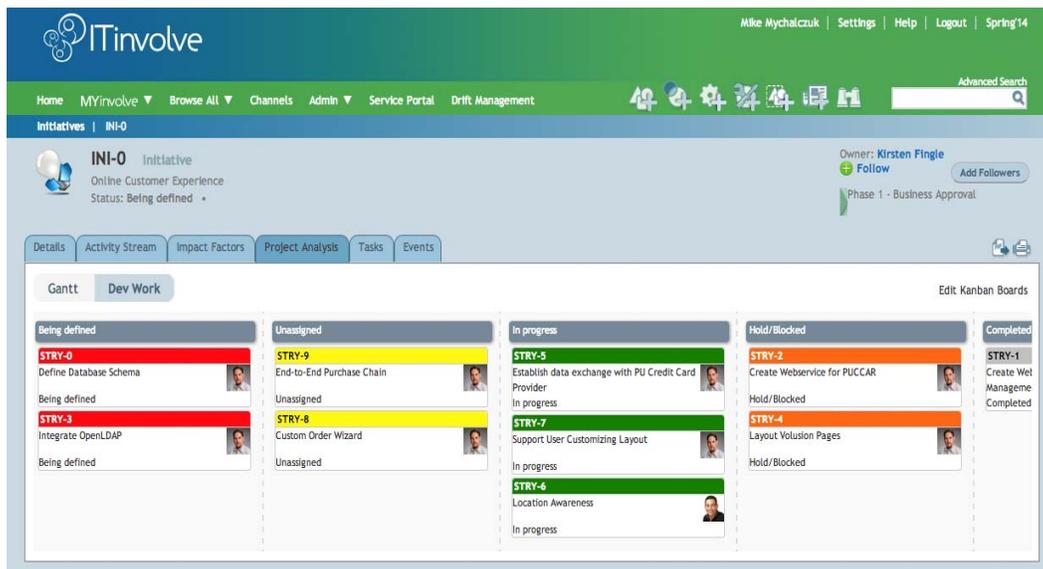
In contrast, there are many tools on the market that focus primarily on supporting human collaboration and communication, either across an organization or specific to particular teams, processes, or tasks. Such tools include portals like Microsoft SharePoint, groupware of various sorts (email, wikis, and the like), and more focused tools such as Portfolio Management or Application Lifecycle Management (ALM) products.

When it comes to driving business agility across the organization, however, such human communication and collaboration tools have also fallen short, as they generally require an onerous amount of configuration and management from people who have scant time or attention to devote to such dull activities. This limitation leads to bloated repositories full of unsearchable documents, or email inboxes with thousands of messages, or

knowledge management systems that contain information that is so out of date and incomplete that people refuse to spend any time updating them, thus defeating their purpose entirely.

ITinvolve has largely solved this combination of problems with their aptly-named *Agility Manager*. Agility Manager can be thought of as a next-generation knowledge management application that combines automated metadata collection and policy enforcement with broad human curation capabilities, balancing the need for automated governance and support for human activities within software development teams or more broadly across the organization.

Agility Manager also adds a set of objects to aid in projects including business goal, release, and iteration objects, as well as project planning functionality like Gantt charting and Kanban boards, as shown in the figure below. Furthermore, data need not physically reside in ITinvolve but can be federated so the object relationships are in ITinvolve but the full data set lives in a third-party source, for example, a pdf-formatted policy document on a file share or detailed functional requirements in Atlassian JIRA or Rally Software's ALM platform.



The screenshot displays the ITinvolve web application interface. At the top, there is a navigation bar with the ITinvolve logo, user name 'Mike Mychalczuk', and links for 'Settings', 'Help', 'Logout', and 'Spring '14'. Below this is a secondary navigation bar with 'Home', 'MYinvolve', 'Browse All', 'Channels', 'Admin', 'Service Portal', and 'Drift Management'. The main content area shows an 'Initiatives' section with 'INI-0' selected, titled 'Online Customer Experience' with a status of 'Being defined'. A 'Project Analysis' tab is active, displaying a Kanban board with columns for 'Being defined', 'Unassigned', 'In progress', 'Hold/Blocked', and 'Completed'. Each column contains several task cards with titles like 'Define Database Schema', 'End-to-End Purchase Chain', 'Establish data exchange with PU Credit Card Provider', etc., and their current status.

ITinvolve Agility Manager illustrating project analysis Kanban boards (Source: ITinvolve)

Furthermore, the entire ITinvolve suite of applications (Agility Manager plus some value-added extensions) are Software-as-a-Service (SaaS) applications built on the Salesforce1 Platform. This platform choice gives ITinvolve customers pay-as-you-go, per-user pricing that simplifies onboarding and ramping up, as well as the scalability and integration support you'd expect from Salesforce.

The ITinvolve Agile Architecture Story

Architecting for business agility in the enterprise requires far more than the proper application of architectural practices to Agile development projects. In fact, it requires a complete rethink of what it means to architect an organization. Business agility is a property of the organization as a whole, which means that the enterprise must be treated as a Complex Adaptive System, where business agility is an emergent property of the system.

Such Complex Systems are actually systems of systems; in the case of an organization, the component systems are technology systems and people. The challenge of architecting for business agility, therefore, extends beyond architecting the technology. It's also critical for the organization to architect its people as well.

The way to “architect the people” in the organization is to apply appropriate governance policies and processes that encourage the desired behavior. Excessive or inappropriate governance typically backfires, however, as too many rules and policies can lower morale and productivity. Instead, it's important to encourage desired behavior via effective incentives, coupled with tools that facilitate the desired behavior, yet make undesirable behavior difficult. To this end, ITinvolve empowers people so that they are willing and even desirous to adapt their behavior. ITinvolve helps people facilitate their work by giving them the information and analysis they require, and enabling collaboration with other relevant team members (even ones they may not know about).

Giving people better tools and rewarding them with free food or cash bonuses is only part of the story. In order to achieve the business agility goals of the organization, this human governance must be seamlessly integrated with the automated governance of technology. In other words, technology must support the desired human behavior by providing the right tools, but people must also be able to properly manage and govern the technology in order to support the flexibility necessary for the organization to be agile.

Furthermore, as emergent behavior is inherently unpredictable, it is essential that organizations take an iterative approach to directing human and technology behavior in order to increase the organization's agility. Each iteration should include a feedback loop that reflects the resulting effects of any policy or tooling change in order to improve results of subsequent iterations.

ITinvolve's combined automated governance and human curation approach brings together the essential elements of this Agile Architecture story. At its core, the Agility Manager is an application that simplifies and encourages the desired behavior from the teams using the application. It also supports multiple approaches to automating the

collection and communication of necessary metadata, as well as the automation of policies.

Instead of discouraging active participation in knowledge collection as standard portals and knowledge management tools do, ITinvolve empowers people to share their knowledge, as shown in the figure below. This approach facilitates cross-team collaboration on projects and decisions by supporting more effective risk management using current and accurate information. As a result, people can get their jobs done and make better decisions by fully understanding the various dependencies among requirements, policies, applications, and other elements of their work environment.



ITinvolve Agility Manager illustrating interrelationships among various diverse types of people and objects in the organization (Source: ITinvolve)

ITinvolve also brings together and integrates varied data sources, including documents on portals, metadata in asset management tools and CMDBs, automation scripts and recipes, and other information that would otherwise be scattered about the organization or locked up in the heads of key personnel. This “tribal knowledge” of each expert in the enterprise is a critical asset that is always at risk of being lost, either through people leaving the organization, or simply forgetting the details over time.

Not only does ITinvolve facilitate the collection and dissemination of such tribal knowledge, but the application also supports the continuous review of such information

by other experts in the organization. The result is an iterative, continuous-feedback approach to ongoing improvement of the information that ITinvolve manages. In fact, by bringing various individuals together from across different departments within the organization, ITinvolve supports flexible collaboration across the enterprise. Such cross-silo collaboration is critical for Agile projects, DevOps, and other initiatives that drive greater agility in the enterprise.

The Intellyx Take

One area where Agile development methodologies and the Agile Architecture approach to treating the organization as a Complex Adaptive System overlap is with the focus on self-organizing teams. Top-down approaches to creating teams – essentially, managers formally assigning roles to individuals – limit the flexibility of the team and thus impact the agility of the organization. Allowing teams to organize themselves addresses this issue.

And yet, as teams expand beyond a handful of people, especially when such teams are cross-functional and involve a variety of people in different roles, then self-organization can potentially begin to break down. The challenge isn't necessarily the competency of the individuals involved, but rather their ability to communicate effectively and maintain coherent, up-to-date tribal knowledge, even as the team's personnel might change or their tasks may evolve.

Solving this challenge is central to ITinvolve's value proposition, because it both facilitates and supports the self-organization so critical to Agile teams, while at the same time addressing the communication and knowledge management challenges endemic to cross-functional teams. As a result, ITinvolve fosters a self-regulating system that provides greater transparency to all team members and management alike, as well as automated constraints on the behavior of associated technology assets, in such a way that facilitates the iterative feedback loop essential to driving agility long-term in large organizations.

ITinvolve is an Intellyx client. Intellyx retains full editorial control over the content of this paper.