Five Key Focus Areas for New-Age Collaboration

Organizations need to enhance how they collaborate internally and externally, adding further agility and synergy into their ecosystems to tame the digital storm and sail through the rising tide of innovation.

Executive Summary

Social, mobile, analytics and cloud (aka, the SMAC Stack) have created a new-age collaboration platform. According to an ABI Research study on worker mobility and enterprise social collaboration, the market for such products is projected to grow to $3.5 billion by 2016.¹ Five years ago, the Harvard Business Review articulated the need for a Chief Collaboration Officer² to unite the house against the digital storm caused by the deluge of new technologies and innovations. Organizations with traditional business models are already being vanquished by this storm.

In fact, new-age collaboration has brought forth a new economy, a sharing economy, which pivots around networks, shared assets and information, unlike the industrial economy whose organizational and economic components are market- and capital-focused, respectively. The so-called “sharing economy,” which brings value through access and networking, is pressuring old industrial business models premised on the principles of scarcity, ownership and hierarchy. The growing popularity of Linux, Airbnb, Wikipedia, Uber, Lyft and Zopa (for peer-to-peer lending) are indicative of this model shift.

To some degree, the old guard needs to either embrace elements of the shared economy or be rendered irrelevant. External information environments are evolving faster than internal environments mainly due to a more conducive open environment for speed of information flow and value transfer than most organizations’ internal environments.

Many organizations are already leveraging the social media ecosystem for marketing and customer support. Some are applying social networking internally to more effectively share insights and democratize information, as well as tear down or convert calcified decision-making hierarchies into modern “wirearchies.”³ But in this age of arbitrage, the mere use of a targeted social platform is not enough. It can introduce change, but to speed its implementation organizations must leverage emerging collaborative technologies, at all possible levels, to achieve synergy within a program, across programs, across channels and with all stakeholders who are a part of the extended organization and external world.

This white paper touches upon key characteristics and technology enablers of collaboration at five different levels in an enterprise context.
Collaboration in an Enterprise Context

Collaboration Within a Program

Organizations often complain about ineffective software development and delivery. Programs are not delivered according to their requirements. The quality of the program falls short. Many times budget and time overshoot the target. To add to the plight, modern applications are more complex to implement and often are unable to address the needs of geographically distributed stakeholders. With these issues in the backdrop, DevOps is gaining popularity. DevOps seeks to address the core issue of lack of collaboration between the individuals associated with software development and operations. The philosophy of DevOps lies in collaborative software development designed to bring together individuals across departments who are involved in different phases of the development program.

Collaborative program execution requires an increased focus on both people and implementation. For organizations following the Waterfall model, this could require a cultural shift. For organizations already following Agile software development methodologies, the move to DevOps is more about a gradual adoption of a new breed of linked tool chain to facilitate further collaboration and faster execution.

These toolsets provide an integrated platform for collaboration through clear separation of concerns, process automation and feedback loops. Concepts such as service virtualization and microservices have contributed to parallel development of autonomous components by reducing dependencies and separating concerns. Using functional programming, business process modeling and model-driven development, business users and developers can work together to bridge the gap between requirement and implementation.

Automation test case generation and automated testing, for example, improve the quality of the products enabling faster collaboration between business users, developers and quality engineers. The DevOps platform facilitates continuous feedback and collaboration between different stakeholders across the program. In this regard, automated release management plays a big role in making sure feedback is quickly accommodated. The use of DevOps is not limited to the DevOps “unicorn” (e.g., Google, Amazon, Twitter, Etsy, etc.). Gartner, Inc. expects strong growth opportunities for DevOps toolsets, with the total for DevOps tools reaching $2.3 billion in 2015, up 21.1 percent from $1.9 billion in 2014.
Collaboration Within the Organization

In the midst of impending digital transformation, companies are focusing on the organization as a whole to stay connected and informed and to enable deeper collaboration. They are making sure that all sub-units are in sync, moving in lock step towards the business vision. In building a connected enterprise, SMAC technologies have acted as a catalyst.

This set of technologies has significantly reduced the cost of content creation, distribution and discovery. Organizations are leveraging these technologies to cost-effectively improve communication and relationships within the organization by increasing the speed of information flow, thereby transferring value among the stakeholders much faster. Organizations are not only saving time but also saving money through the reuse of assets and expertise across programs. A common knowledge base with free-flowing, transparent access of information and a sharing attitude is delivering faster learning. Google is the torch-bearer in this sphere.

As Susan Wojcicki, CEO of YouTube, wrote, there are eight pillars of innovation on which Google’s exponential growth relies. Two of them are sharing everything and looking for ideas everywhere within the organization. Google has followed a culture of share-everything to encourage exchange, discussion and reinterpretation of ideas from all levels. Dell, Lowe’s, Motley Fool, SAP, Cisco, EMC, TELUS, CSC and many others now understand that social collaboration within the organization is not a mere strategy, it’s an imperative.

To integrate collaboration across programs, many organizations are using content management systems (e.g., SharePoint and Documentum), enterprise social network tools (e.g., Yammer, Slack and FB@Work) and enterprise search applications (e.g., Google Search Appliance and MarkLogic). But the use of technologies alone will not make enterprise-wide collaboration a reality. This calls for a shift in thinking among employees.

For starters, organizations must treat employees as partners. They should find incentives to improve information sharing and collaboration. Collaborative initiatives should be rolled out to encourage teamwork. In the traditional hierarchical organization, decision-making is generally confined to the top level of the pyramid. But to invite ideas and participation and improve agility, decision-making should be pushed down to the bottom of the pyramid. Employees at the bottom of the pyramid should be empowered to make decisions and form self-organized teams.

Amazon and Netflix have disrupted the existing business models by leveraging smaller empowered groups developing micro-services. This has helped them to improve agility manifold and outrun competitors. The Amazon.com website uses more than hundreds of micro-services to build a webpage. Based on strong operational collaboration and robust architectural style, this level of integration is unprecedented.

Collaboration Between Channels

Communication channels play a pivotal role in collaboration. It can give the organization a much coveted “Two-Second Advantage.” The quality of decision-making and judgment depends on timely information coursing through myriad communication channels, received via multiple devices. But the multiple devices and channels should not create complexities or confusion. Instead, emerging technologies should be leveraged to fit collaboration naturally into the flow of work. The end user should experience consistent behavior across multiple devices. Seamless interactions across channels and provisioning of the right information to the right place at the right time and in the right context are the two pillars of effective communication. Winning organizations are leveraging real-time technologies not only for real-time system integration but also for content sharing, peer-to-peer as well as multiparty instant messaging, and audio-video conferencing.

With existing technology, one can click to call using the Web without a handheld device. Using the call handoff feature, one can switch from a desk phone to the mobile phone and vice versa. Using the “single number reach” capability phone, desktop or mobile devices can be linked to the same number as a single point of contact. And based on context (i.e., location or status), a call can be routed to the appropriate device, automatically. Platforms such as WebEx and LiveMeeting enable content
sharing, multiparty instant messaging, audio and video conferencing under one platform. As of recently, Microsoft’s Surface Hub initiative is yet another player in the area of unified communication. The standard messaging protocol, Extensible Messaging and Presence Protocol (XMPP), is a key enabler. By deploying an XMPP-based solution, an organization will have the ability to extend instant messaging to external partners and customers.

Collaboration Within the Extended Enterprise

The cocreation of solutions is shifting gears. Organizations are collaborating more closely with their suppliers, vendors and other stakeholders that are a part of their extended enterprises to invent new services, solutions and products that solve large business problems. The invention of IA-64 was a first of its kind where Intel brought together technology suppliers, software developers, investors and end users to create the next generation of 64-bit microprocessors.15

With the passage of time, products have become more complex and the product ecosystem has expanded. Take Android, for example. More than 18,796 distinct Android devices in the market are built on the Android Operating System.16 Worldwide, 71% of around 2.3 million developers are working on the Android platform.17 Ensuring that every stakeholder is on the same page is critical to a successful rollout of a new service, platform or solution. It is equally important to provide access for shared assets at the right time. Microsoft, for example, is positioning Windows, Azure and Office as its three key platforms on which developers can collaborate to build new solutions.

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The reduced cost of sharing information has enabled organizations to extend their collaboration boundaries with their stakeholders. Platforms such as Tibbr18 accelerate work completion, connecting people and enabling content sharing, discussions, task assignments and application development. Such systems have brought employees, customers and partners under the same platform.

Another important aspect in collaboration is standardization at different levels. Standardizations help integrate platforms across organizations or industries for common digital initiatives. New standards are emerging in the form of ontologies such as schema.org and GoodRelations. Schema.org, sponsored by Google, Microsoft, Yahoo and Yandex, “is a collaborative, community activity with a mission to create, maintain and promote schemas for structured data on the Internet, on webpages, in e-mail messages, and beyond.”19 It has made information discovery much easier and more effective through semantic search and linked data.

GoodRelations is a vocabulary for describing the semantics of products, associated services and other components related to e-commerce. More than 10,000 companies including Google, Yahoo and BestBuy use it.20 It has enabled quicker integration between product developers, sellers, marketers and reviewers. (For more on this topic, please read our white paper “Semantic Enterprise: A Step Toward Agent-Driven Integration,” which discusses the role of semantic ontologies and technologies in enterprise integration.) Open Container Project is another such recent collaborative initiative in which more than 20 of the biggest names in technology, including Amazon, VMware, Docker, Google, Microsoft and Red Hat teamed up to establish container standards and specifications.21

Collaboration with the External World

Organizations are already leveraging social media to enhance and extend customer service and receive feedback and product/service ideas. They are communicating with the external world to build a more trustworthy relationship that extends beyond single transactions. And they are using social analytics to gain insights and are integrating social platforms within the value chain.

For example, Ford has created FordSocial22 to share customer experiences and factor in customer feedback. American Express has reinforced its image as a partner for small business owners by helping such owners connect with each other through its OPEN Forum.23 Paint and car companies as well as insurers have created situational Facebook apps on the occasion of Holi, the Indian festival of colors, to promote their brand by striking an emotional chord with fans.24

In the modern era of digitization, a key focal point is to bring economic value through sharing and collaboration. A company can enable employees
to communicate with the external world to build more trustworthy relationships. Organizations can provide platforms for external communities to collaborate on marketing and advocacy initiatives. Crowdsourcing is similarly redefining business. Wikipedia has put private traditional encyclopedia companies out of business through the art of knowledge crowdsourcing. reCAPTCHA innovatively used crowdsourcing techniques to digitize millions of books. Collaboration with the external world is more than just utilizing Twitter or Facebook; it is more about identifying how a social layer and collaboration with the external world can help improve IT and business processes.

Looking Forward

In this new shared economy, it’s important for organizations to put more focus on collaboration as business dynamics and technologies change. Organizations need not only a dedicated sub-organization working on collaboration but this group must be organized to maintain focus and balance at the different levels of collaboration discussed in this paper. This will ensure synergy throughout the entire value chain. Organizations need to cultivate a culture of sharing by adopting wirearchies, motivating stakeholders and leveraging emerging technologies.

To stay competitive, however, they must balance their needs with budgetary limitations. The benefit of collaboration may reside at different levels. Taking this approach, the opportunities are seemingly endless, but unless organizations embrace a more innovative approach, the benefits of collaboration are difficult to achieve. The basic need remains to stay connected in order to share assets, skills, ideas and time across various levels of the extended enterprise. The need can be assessed by measuring the gaps in knowledge-sharing, assets and skills reuse and stakeholder participation. Shareholder feedback can also illuminate areas of improvement.

If the balance is not maintained between internal and external collaboration, the gap between demand and supply will keep accelerating, leading to significant hurdles.

Last but not least, the effectiveness of a program, timeliness of delivery and level of stakeholder engagement with respect to the five levels of collaboration can all help to further this endeavor. It is also worth noting that striking a balance between internal and external collaboration is critical for ensuring that new opportunities to innovate, coupled with feedback from external channels, are harnessed quickly and effectively. If the balance is not maintained between internal and external collaboration, the gap between demand and supply will keep accelerating, leading to significant hurdles.

Once the gaps or needs are identified, the effectiveness of collaboration at each level can be improved through proper provisioning of technologies, campaigns, training or awareness programs, processes and organizational changes.

Footnotes


19 https://schema.org/.
21 http://www.opencontainers.org/.
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