LEARNING CONSORTIUM
FOR THE CREATIVE ECONOMY
presented by ScrumAlliance®

The Learning Consortium for the Creative Economy 2015 Report

Presented to the Drucker Forum in Vienna, Austria

November 4, 2015

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ScrumAlliance®
Transforming the World of Work

The Learning Consortium for the Creative Economy

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> *In a technology-driven economy, does management need a fundamental makeover? How can digital technology be leveraged to augment human capacity? Can we achieve breakthrough innovation across the board, creating new opportunity for people? Based on the new technology infrastructure, is a new economic order in the making?*
>
> Drucker Forum 2015: Key Themes[1]

As foreshadowed at the 2014 Drucker Forum, in March 2015, a group of 11 companies, under the auspices of Scrum Alliance®, formed a Learning Consortium for the Creative Economy (LC) to explore the above questions, by going and seeing for themselves what was actually happening on the ground. During 9 site visits conducted in the summer of 2015, the LC explored the hypothesis that forward-looking companies had already made progress in developing and implementing leadership and management goals, principles, and values that constitute a fundamental management makeover.[2]

Summary and recommendations

Although there were many variations observed during the site visits, the LC observed a striking convergence toward a set of management goals, principles, and values that are markedly different from the management practices of hierarchical bureaucracy that is still pervasive in large organizations today.

Site Visits 2015:
Agile42 (Berlin, Germany)
Brillio (Bangalore, India)
C.H.Robinson (Minneapolis, MN, USA)
Ericsson (Athlone, Ireland)
Magna International (Barcelona, Spain)
Menlo Innovations (Ann Arbor, MI, USA)
Microsoft (Seattle, WA, USA)
Riot Games (Santa Monica, CA, USA)
SolutionsIQ (Seattle, WA, USA)

Although there is no "one size fits all," the site visits revealed a family resemblance among the goals, principles, and values of the companies visited. The site visits showed that implementation of the goals, principles, and values requires *strong leadership*, with a particular *mindset*, which includes:

- Goals, attitudes, and values that focus on added value and innovation for customers and users, rather than a preoccupation with short-term profits.
- Managers seeing themselves, and acting, as enablers rather than controllers, so as to draw on the full talents and capacities of knowledge workers.

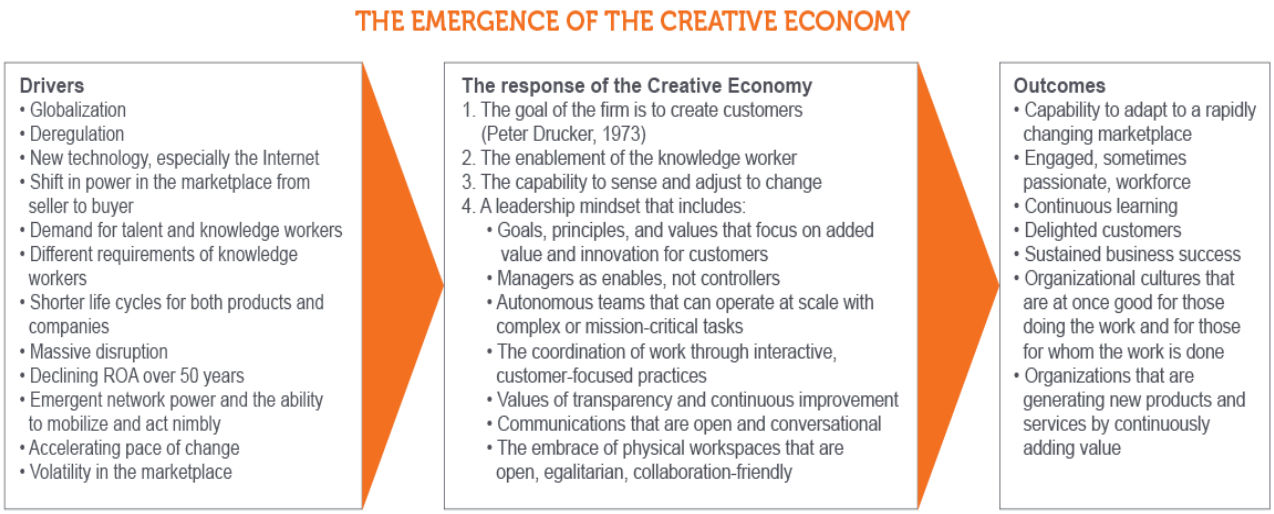
- The use of autonomous teams and networks of teams, in some cases operating at large scale with complex and mission-critical tasks.
- The coordination of work through structured, iterative, customer-focused practices, rather than bureaucracy.
- Embodying on a daily basis the values of transparency and continuous improvement of products, services, and work methods.
- Communications that are open and conversational, rather than top-down and hierarchical.
- The embrace of physical workspaces that are noticeably open, egalitarian, and collaboration-friendly.

In workplaces that have pursued these goals, principles, and values over a sustained period by leaders with the requisite mindset, the site visits revealed:

- A capability to generate continuous added value for customers and users.
- An enhanced ability to respond to unpredictable shifts in the marketplace.
- Knowledge workers who are remarkably engaged, and sometimes passionate, in their work.
- In the more advanced implementations, organizational cultures that are at once good for those doing the work, for those for whom the work is done, and for the financial health of the organizations themselves.
- The emergence of a Creative Economy, i.e., an economy in which organizations are generating new products and services by continuously delighting customers and adding new value.

A universal feature of all the site visits was a recognition that achieving these benefits is dependent on the requisite *leadership mindset*. Where the management practices and methodologies were implemented without the requisite mindset, no benefits were observed. Individually, none of the observed management practices are new. What is new is the way that the new management goals, practices, and values constitute a coherent and integrated system, driven by and lubricated with a common leadership mindset.

Another universal feature of the site visits to organizations where the goals, principles, and values are being successfully pursued is *strong leadership*. This was not only true in organizations that were in transformation from an entrenched legacy culture of hierarchical bureaucracy, where courageous championing of the different goals, principles, and values is a sine qua non of progress in overcoming an adherence to the status quo. It was also true in newer organizations that were founded from the outset with the goals, principles, and values of the Creative Economy, where continuous championing and vigilance are seen as necessary to preserve the organizational culture and to prevent reversion to hierarchical bureaucracy, especially as the organization grows.



Background

In the twentieth century, the management principles of hierarchical bureaucracy helped organizations meet the demand for mass-market products and services and generate unprecedented material prosperity for many. But then the world changed. Deregulation, globalization, and new technology, particularly the Internet, transformed everything. Power in the marketplace shifted from seller to buyer. The old ways of getting things done became less and less effective. Firms had difficulty making money and their life expectancies declined.[3]

Some firms responded by applying existing management principles more energetically. They tightened management control. They downsized. They reorganized. They delayered. They empowered their staff. They launched innovation initiatives. They reengineered processes. They launched sales and marketing campaigns. They acquired new companies. They shed businesses that weren't doing well. They focused tightly on maximizing shareholder value. They gave the top executives stock-based compensation in an effort to make them more entrepreneurial. These fixes sometimes led to short-term gains, but they didn't solve the underlying problem. Deeper change was needed. The principles of twentieth-century management itself had become obsolete.

Another set of organizations, and parts thereof, began doing something different. They developed and implemented a different leadership mindset, with a set of goals, principles, and values that were better suited to the emerging marketplace of the twenty-first century. The resulting ways of organizing, creating, marketing, making, selling, and delivering products and services don't look or feel much like their predecessors. The workplaces they create look and feel different. They are highly interactive. These organizations are not just tinkering with the principles that were once successful but are now increasingly irrelevant and ineffective. These organizations have been creating something fundamentally different.

The leadership mindset visible in the organizations visited by the LC reflects a recognition that the big, lumbering twentieth-century bureaucracies are too slow and clumsy for the marketplace of the twenty-first century, in which fickle but powerful customers are in charge. Now, "predictable" and "reliable" performance isn't good enough anymore. For true success, the organization has to deliver experiences that delight customers — a much more difficult

undertaking, and something that can't be accomplished without embracing different goals, principles, and values.

The leadership principles that were observed in these site visits are not a random collection of fixes. They fit together as a mutually reinforcing set of management patterns. Once an organization or unit embraces the leadership mindset, and pursues it consistently over a period of time, it affects everything in the organization — the way it plans, the way it manages, the way people work. Everything is different. It changes the game fundamentally.

What we learned

Principal findings from the nine site visits include:

Acquisition of the leadership mindset takes time. In older firms that had operated for some time with traditional management practices, the site visits confirmed that a transition from traditional management practices to the different goals, principles, and values is possible, but it takes time. It is a process of constant learning and adapting. The transition cannot be accomplished by sending staff and managers to a short training course, although such courses have helped begin the journey. In some cases, the beginning of the leadership journey was sparked by a visit to another unit or organization, or an encounter with a coach, attending a conference, or reading a book or article.

Implementation of the goals, principles, and values takes time. Beginning the journey is one thing. It is only over time that leaders and their organizations come to understand the scope, pitfalls, challenges, and opportunities of the journey. After the journey begins, the process of organizational transformation is a matter of learning by doing, with constant inspection, adaptation, and reflection, drawing on the lessons of setbacks, building on successful practices, learning from others, and deep listening.

Firms are at different places in the journey. The site visits revealed that some firms are at an early stage of the journey, with teams still learning how to implement the relevant leadership and management practices, particularly the challenge of getting work fully done in the course of an iteration. Other firms are at a more advanced stage of the journey, with hundreds of teams operating at the same cadence and routinely producing finished work at the end of each iteration.

All journeys involved overcoming setbacks. All organizations experienced setbacks in their journeys. All organizations have taken actions that they now view as learning experiences, but that at the time looked like total failure. These setbacks were seen as learning experiences and didn't discourage the leaders from continuing on their transformation journey, which they saw as crucial for the future. These leaders persevered and eventually succeeded by adherence to the leadership goals, principles, and values.

All firms are adapting the practices to fit their own contexts. All companies are continuing to adapt the terminologies and methodologies to fit their own contexts. In applying the management practices to large-scale implementations, firms drew on their own experience as well as other exemplars. In some cases, an emphasis on certain practices makes it less necessary to introduce other practices.

The management practices are successfully operating at scale. Several of the LC members have been successfully using the new management practices for a number of years at scale. In two of the largest LC members, we found units of several thousand people all operating with autonomous teams using the new management principles with success. In another company that

now has close to 2,000 staff, the whole organization has been operating in this manner since its creation in 2006.

The management practices are successfully handling complexity. Some LC members are successfully applying the new management practices to operations of great complexity. For instance, one firm is using the new management practices to develop a vast network-management system that covers hundreds of thousands of base stations all around the world. Some 40 percent of global mobile traffic runs through networks it has supplied, and more than 1 billion subscribers around the world rely every day on networks that it manages. In another example, a firm is using the new management practices to operate a vast global computer system that has around 70 million users and represents a significant proportion of the world's Internet traffic.

The management practices can be highly reliable. Some LC members are successfully using the new management practices to deliver services where absolute reliability is a requirement. The business of one firm, for instance, includes software that supports medical devices that must be fail-safe: The last time the firm experienced an "emergency" was in 2004.

The practices are spreading beyond software development. While the new management practices were most obvious in software development, they were also evident in firms involved in manufacturing, telecommunications, transportation, consulting, and coaching. All LC members are finding that software plays an increasingly important role in their businesses and business models, reflecting the dictum of venture capitalist Marc Andreessen that "software is eating the world."[4] Members report that there are now very few, if any, "IT projects." There are now only business projects. From this perspective, "software" is merely a tool to do business projects.

The management practices are both durable and fragile. Despite setbacks over the course of the various journeys, the management practices are showing considerable durability. One firm has been operating with the new management practices for 14 years, another for 9 years, and another 7 years, some at very large scale. Yet, as noted above, the management practices are also fragile in the sense that they are vulnerable to disruption from the intrusion of different managers with traditional management mindsets.

An invitation

This the full report of the LC, which is also available at http://www.scrumalliance.org/salc15report. The members of the LC invite those interested not only to read the report but also to make the same journey of discovery the LC made, by visiting organizations and seeing for themselves the implementation of these leadership and management principles, something that is now occurring in many organizations around the world.

Organizations wishing to participate in the 2016 Learning Consortium for the Creative Economy should contact Scrum Alliance at learningconsortium@scrumalliance.org.

About Scrum Alliance

Scrum Alliance is a nonprofit association of more than 400,000 members worldwide. Its mission is to "transform the world of work, by guiding organizations to become prosperous and

sustainable, to inspire people, and to create value for society.” For more information, please visit www.scrumalliance.org.

The Learning Consortium of the Creative Economy

Full report

In March 2015, a group of 11 companies formed the Learning Consortium for the Creative Economy (LC), under the auspices of Scrum Alliance®. The primary objective was to promote peer-to-peer learning by bringing together members to share resources and experience about innovative leadership and management practices in the Creative Economy. (See Appendix A for more on the Creative Economy.)

The Learning Consortium comprised a diverse group of organizations of different sizes, ages, and sectors around the world. The LC was a free exchange of ideas and practices in an atmosphere of trust and remarkable openness. Appendix B contains a description of the areas that the LC set out to examine.

During July and August 2015, members of the LC conducted eight physical site visits and one virtual site visit. The members that hosted site visits were as follows.

agile42: Participation in a coaches' boot camp in Ann Arbor, MI, USA[5]
Brillio: Virtual site visit to Bangalore, India[6]
C.H. Robinson International: Site visit to the IT group in Minneapolis, MN, USA[7]
Ericsson: Site visit to the network management group in Athlone, Ireland[8]
Magna International: Site visit to the mirror factory in Barcelona, Spain[9]
Menlo Innovations: Site visit to Ann Arbor MI, USA[10]
Microsoft: Site visit to the Visual Studio group in Seattle, WA, USA[11]
Riot Games: Site visit to Santa Monica, California, USA
SolutionsIQ: Site visit to Seattle, WA, USA[12]

On each site visit, the host organization made presentations and held discussions about its leadership and management practices and showed what it is doing and learning. Members also learned about the history, evolution, and collected learning that the companies experienced over time. In most cases, these presentations were supplemented by informal, unscripted conversations with those doing the work.

In September 2015, members participated in a gathering in Denver to review what had been learned and discuss the way forward. The LC set out to ascertain what is actually happening on the ground. This report reflects the outcome of the site visits and that discussion.

Here are the main findings.

A. Main findings

The new management practices are very different

Although there were many variations observed during the site visits, there was also a striking convergence toward a set of management goals, practices, and values that are noticeably different from management practices of hierarchical bureaucracy that are still pervasive in large organizations today.

Although there is no "one size fits all," the site visits revealed a family resemblance among the goals, principles, and values of the companies visited. The site visits showed that implementation of the goals, principles, and values requires *strong leadership*, with a particular *mindset*, which includes:

- Goals, attitudes, and values that focus on added value and innovation for customers and users, rather than a preoccupation with short-term profits.
- Managers seeing themselves, and acting, as enablers rather than controllers, so as to draw on the full talents and capacities of knowledge workers.
- The use of autonomous teams and networks of teams, in some cases operating at large scale with complex and mission-critical tasks.
- The coordination of work through structured, iterative, customer-focused practices, rather than bureaucracy.
- Embodying on a daily basis the values of transparency and continuous improvement of products, services, and work methods.
- Communications that are open and conversational, rather than top-down and hierarchical.
- The embrace of physical workspaces that are noticeably open, egalitarian, and collaboration-friendly.

The leadership and management practices that were observed, and the extent to which they ae being implemented by the LC members, are described in detail in Section F below.

Individually, the "new management practices" are not new

In this report, the collection of leadership and management goals, practices, and values that these firms are embodying are referred to as "the new management practices."

Individually, none of the management practices are new. In fact, many of the practices are based on decades of learning. For instance, Menlo Innovations is explicitly modeled on Thomas Edison's laboratory at Menlo Park, New Jersey, which was subsequently reconstructed at Greenfield Village at Henry Ford Museum in Dearborn, Michigan.

What is new is the way that the new management goals, practices, and values constitute a coherent and integrated system, driven by and lubricated with a common managerial mindset.

The new management practices require a different mindset

A constant theme in all the site visits is that the new management practices constitute and require a different mindset. Instead of a *controlling* mindset in which there is an implicit distrust of those doing the work, the new management practices embody an *enabling* mindset, with an explicit trust in the talents and capabilities of those doing the work, along with the belief that if the organization provides the right environment, values, and goals, those doing the work will usually deliver continuous value and innovation for the ultimate users and customers. The mindset is explicitly customer-focused, with profits seen as the result, not the goal.

The site visits confirmed that the requisite mindset was acquired in different ways:

- A recognition that traditional inward-looking, control-minded management practices are ineffective in a world of rapid, unpredictable change in which the customer has choices and information about those choices.

- A recognition that the old way of working was producing products and services that were usually late and never exactly what the customer wanted.
- A realization of the high cost of mounting “technical debt” in software development, i.e., the cost of resolving a backlog of software problems caused by multiple short-term fixes that have not been properly reconciled with the system’s architecture and that, if left unresolved, result in devastating system outages.
- Seeing or visiting another unit or organization implementing the new management practices.
- Experience acquired in training, coaching, or reading articles and books.
- Reflection, self-learning, and trial and error.

In the case of some of the younger firms, the founders launched the firm with the explicit goal of creating organizations with the new management practices. In other firms or parts thereof, the organization was being managed in the traditional way with top-down hierarchical bureaucracy, and a fundamental shift in management mindset was undertaken.

However the mindset was acquired, members consistently maintained that the mindset is a prerequisite for success in implementing the new management practices. Implementing the practices with a traditional management mindset of control produced no benefit.

Members recounted instances where new management practices floundered until the leaders and managers acquired the right mindset. There were also cases where the new management practices had been successfully introduced and then went into decline with the arrival of a new manager who lacked the appropriate mindset. When the values were reintroduced by a new leader, performance rebounded.

The mindset embodies more self-awareness in the use of management authority

A key aspect of the leadership and management mindset is greater self-awareness of the potential of managerial authority to inspire and uplift as well as to discourage and dispirit. The mindset is characterized by an intentional, even delicate, use of managerial authority. All members spoke of this in their own way. One formulation was in terms of the continuing effort to get the right balance between control and autonomy.

In some firms, the management “mindset” is now the “organizational culture”

In their various implementations, the members reflect a continuum from a leadership and management "mindset" to “organizational culture." While all firms spoke of a different mindset, several of the firms spoke explicitly in terms of an “organizational culture” that is driving the business forward and creating value for customers.

In these firms, "culture" is more explicit and pervasive than merely the mindset of the managers alone, which is sometimes present in only part of the organization. In these firms, the same goals, attitudes, behaviors, and values are shared equally throughout the whole organization — a phenomenon that our informal interactions with staff confirmed. In these firms, an explicit effort is made to recruit people who already share this culture. In effect, it is not possible to work in those firms unless you embrace the collaborative, interactive culture that the organization exemplifies.

The new management practices are successfully operating at scale

Several of the LC members have been successfully using the new management practices for a number of years at scale. In two of the largest LC members, we found units of several thousand people all operating with autonomous teams, having used the new management principles with success for a number of years. In another company that now has close to 2,000 staff, the whole organization has been operating in this manner since its creation in 2006.

The new management practices are successfully handling complexity

Some LC members are successfully applying the new management practices to operations of great complexity. For instance, one firm is using the new management practices to develop a vast network-management system that covers hundreds of thousands of base stations all around the world. Some 40 percent of global mobile traffic runs through networks it has supplied, and more than 1 billion subscribers around the world rely every day on networks that it manages. Another company is using the new management practices to operate a vast global computer system that has around 70 million users and represents a significant proportion of the world's Internet traffic.

The new management practices can be highly reliable

Some LC members are successfully using the new management practices to deliver services where absolute reliability is a requirement. The business of one company, for instance, includes software that supports medical devices that must be fail-safe: The last time the firm experienced an "emergency" was in 2004.

The new management practices are not limited to software development

The new management practices were most obvious in software development, but they were also evident in firms involved in manufacturing, telecommunications, transportation, consulting, and coaching. All LC members are finding that software plays an increasingly important role in their businesses and business models, reflecting the dictum of Marc Andreessen that "software is eating the world."[13]

Members report that there are now very few, if any, "IT projects." There are now only business projects. From this perspective, "software" is merely a tool to do business projects. Looked at another way, all organizations are becoming software organizations. IT departments that were set up as inward-looking groups serving other services in the firm are now becoming outward-facing and directly involved in customer interactions. Product development groups that used to work in isolation from customers now work in direct contact with customers and interact with them on a daily basis.

In addition, Moore's law is having a significant effect on processor speed and size, memory and storage capacity, and display capabilities, including touchscreens, wireless network speeds, and rapid drops in data network pricing. Ubiquitous cellular networks combined with openly accessible app stores enable nimble, independent developers to bring out new technologies in exponentially increasing speed and quantity. This has led to a convergence of software and business such that there few manufactured products today that don't include software-enabled features as a key differentiator. In short, the Creative Economy is a software economy, driven by knowledge workers who are increasingly in hypercompetitive high demand. Attracting,

motivating, and retaining these knowledge workers are front-of-mind issues for all of the firms visited.

These physical workplaces look and feel very different

The site visits illustrated the wisdom of Winston Churchill's dictum, "We shape our buildings, and thereafter they shape us."

The workplaces at all the site visits are dramatically different from traditional workplaces. They look physically different, with open space, vibrant colors, comfortable meeting rooms, and multiple variations and opportunities to encourage collaboration in a pleasant and informal atmosphere, along with pervasive "information radiators." These workplaces feel people-friendly; in one case, pets and babies were part of the scene. They are the opposite of the individual offices and long corridors of bureaucracies or the drab expanses of open space that often characterized early efforts to be more open.

Similarly in manufacturing, traditional assembly lines have been replaced by teams of people working in U-shaped workplaces where team members rotate their roles on a daily basis.

These workplaces represent the physical embodiment of transparency and collaboration. To be in them is to feel that interaction and informality is the norm. The sight of senior executives routinely sitting at mobile desks of exactly the same size as the most junior staff member is a powerful visual signal of the shift from a top-down, authority-based culture. The implicit message here is clear: Anyone can talk to anyone. As employees' needs and expectations are met, it becomes more natural for them to identify with the organization.

At Microsoft's Visual Studio group, for instance, the buildings that house the staff have been totally renovated: All the individual offices, including those of senior managers, that formerly occupied the windows have been replaced by team rooms with mobile desks, and the entire space has been reconfigured in unexpectedly fresh colors, shapes, and patterns. The resulting environment feels young and lively. (Interestingly, the buildings we saw were the second iteration of office redesign. The first was for complete open space, which they found to be ineffective. One unintended outcome was a "library effect," where people felt discouraged from having open communication.) The current iteration is being expanded to other buildings in the Microsoft campus.

At C.H. Robinson, the new facility was specifically designed to promote collaboration and communication. Speakers in the ceiling create "pink" noise (which is noise-canceling), not "white" noise (which is noise-drowning). All tables/desks are 6 feet long, so there is complete equality regardless of rank or position. The CIO's desk is the same as everyone else's. Desks have signal lights that let someone know if the person is available, interruptible, or on the phone and not to be interrupted. There are many enclaves for one-on-one or small-group meetings, with facilities for screen-sharing and videoconferencing. The result is a workplace that people see as "cool."

The new management practices can create a passionate workforce

The workforces that we met on the site visits were remarkably engaged. They viewed the new management practices as creating stimulating and agreeable workplaces. On several visits, staff were noticeably passionate about their work and viewed it as a calling more than a job.

Menlo Innovations explicitly focuses on creating joy for both those doing the work and those for whom the work is done, informally calling itself “Joy Inc.” Based on our site visit, that appears to be a plausible statement of what Menlo is accomplishing.

The transition to the Creative Economy is happening

The site visits confirmed that LC members are on a journey involving transformational shifts in leadership and management, away from hierarchical bureaucracy and toward more Agile and creative approaches to how work is done. The journey is succeeding in delivering a continuous stream of added value and innovation by unleashing the talents and capacities of those doing the work.

The site visits tended to confirm that the new management practices of the Creative Economy thus don’t have to be invented. They already exist even as they continue to evolve. They can be seen in operation in multiple settings and sectors. For both managers and staff who have experienced the new management practices, a belief that they are a better fit for today’s marketplace is strong and pervasive. For them as individuals, a return to the world of top-down hierarchical bureaucracy and rigid plans is unthinkable.

B. The nature of the journey

All firms are customizing the new management practices to fit their own contexts

All the firms visited are continuing to adapt the terminologies and methodologies to fit their own contexts.

For instance, some firms designate a role that resembles the “product owner” in Scrum as a “program manager.” Some members have a role explicitly called a “Scrum Master” while others don’t. While all firms are doing work in an iterative fashion, the length of the iterations varies from daily to four weeks. The firms use teams of different sizes, some with teams of 5–9 members, others with teams of 10–12 members.

In applying the new management practices to large-scale implementations, firms draw on their own experience as well as other exemplars. One firm, for instance, drew on its own extensive experience with multiple Scrum teams, the LeSS framework, and the experience of Spotify to produce its unique way of coordinating more than 100 development teams.

In some cases, an emphasis on certain practices makes it less necessary to introduce other practices. For instance, one firm puts great emphasis on staff involvement in recruitment and requires pairing in all work: This means that the firm needs to put less emphasis on issues related to who works on which team, since a pervasive, firm-wide collaborative culture has already been established. In a sense, the firm *is* the team.

The transformation journey from old to new takes time

In firms that had operated for some time with traditional management practices, the site visits confirmed that a transition from traditional practices to the new management practices is possible, but it takes time. It is a process of constant learning and adapting. The transition cannot be accomplished by sending staff and managers to a short training course, although such a course may effectively begin the journey. The journey may also be sparked by a visit to

another unit or organization, or an encounter with a coach, attending a conference, or reading a book or article.

Beginning the journey is one thing. It is only over time that leaders and their organizations come to understand the scope, pitfalls, challenges, and opportunities of the journey.

After the journey begins, the process of organizational transformation is a matter of learning by doing, with constant inspection, adaptation and reflection, drawing on the lessons of setbacks, building on successful practices, learning from others, and deep listening.

Firms are at different places in the journey

Some firms are at an early stage of the journey, with teams still learning how to implement the relevant leadership and management practices — particularly the challenge of getting work fully done in the course of an iteration, including resolution of dependencies among teams and automated testing of work that has been produced. Other firms are at a more advanced stage of the journey, with hundreds of teams operating at the same cadence and routinely producing finished work at the end of each iteration.

The different aspects of the new management practices, described below in Section E, constitute steps along the way of the transformation journey. The aspects are interconnected, and it cannot be assumed that mastering one or two components will constitute transformation.

The new management practices continue to evolve

The new management practices are strikingly fluid.

Even in the case of firms that were born into the new management practices with no legacy practices to transition from, the journey is about taking the new management practices further with ever more effective collaboration and innovation for the benefit of customers and users.

In some cases, the work processes were being updated before our very eyes. The willingness to use “inspect and adapt” processes is in sharp contrast to the inflexibility of work processes in hierarchical bureaucracies. This flexibility is evident both in companies in the early stages of transformation and in those with more advanced implementations. Thus the principle of “continuous improvement” is applied to the processes by which the work is done as well as to the content of value delivered to customers.

The patterns of implementation vary from firm to firm. For example, one firm is pursuing stable team membership as a core principle to enhance performance, while another firm deliberately uses constantly changing pairs as a means to enhance learning. The differences can be explained in part by the differences in the routes taken on the respective journeys. In the former case, the organization is still working toward creating a collaborative culture and so must take special care in forming individual teams to ensure collaboration. In the latter case, the collaborative culture is now so deeply engrained in the organization that the risk of having an uncollaborative team is almost nonexistent.

The journey never ends

Changes in management practice are sometimes presented as inevitably following an S-shaped curve from one plateau of performance to another. By contrast, the journey of the new

management practices reflects a journey of continuous evolution, with no plateau in sight and no sense of ever having “arrived.”

For instance, in one of the members that has been implementing the new management practices for many years, the terminology for the different functions of team members was under active review during our visit. In another member with a long record of implementing the new management practices, the process for forward visioning was under active review.

C. How the new management practices are happening

The new management practices are led by champions

In the organizations that founders created with the new management practices in mind, the founders are the champions. In those organizations, there was an explicit and intentional concern for culture and Agile ways of working from the outset. While there was no need for any kind of cultural “transition,” champions are still necessary to ensure that all new staff and managers fully embrace the new management practices and do not surreptitiously or unwittingly “infect” the culture with traditional control-minded management practices. This accounts for the considerable emphasis placed on recruitment at those firms, in which compatibility with the culture is an explicit requirement.

In the older firms with entrenched traditional management practices, the transition has been led by a manager or managers at the middle or upper-middle level of management. These are people who are passionate about the need for change, have persuaded others of the need for change, and have themselves begun implementing the changes — sometimes initially without authorization from the top of the organization. Such actions require leadership skills and commitment of a high order.

The transitions require support at a high level in the organization

In the very large organizations, the launch of the new management practices has meant that one part of the organization is operating with the new management practices while the rest of the organization is still in a traditional management mode. In those organizations, the presence of support at a high level of the organization has been a critical element in enabling the new management practices to proceed, in overcoming initial teething problems, and in ultimately coming to be regarded as the way of the future for the organization.

All transitions started with small-scale experiments

In the organizations that had to transition from the command-and-control bureaucratic way of working, the firms began with small experiments, often done informally, without the approval of management. In one case, the experiments were under way for several years before management embraced the approach for the whole unit.

The transitions require delicate guidance from management

One firm described the transition as “managing two polarities.” There were the doubters and resistors who had to be convinced. And there were the zealots who had to be held in check.

Sometimes the zealots would be so “ideologically pure” that they would harden even the resistors who might be showing some openness to the new management practices.

All firms experienced setbacks on their journeys

All organizations experienced setbacks in their journeys. All organizations have taken actions that they now view as learning experiences, including the following:

- In one organization that decided to “go Agile,” the organization took a 25-person team, split it in two, appointed the team’s manager as Scrum Master for the two teams, and called it Agile. The decision had no positive effect on the performance of the team.
- In another organization, the organization was concerned that the first sprints would be unable to produce bug-free software. So they planned five normal sprints, along with one “stabilization” sprint to repair the bugs. What they found was that the availability of the “stabilization” sprint unwittingly encouraged to the teams to be lax about quality, knowing that an overflow sprint was available. As a result, they realized that they had to establish a culture of fully finishing high-quality software in the course of every sprint.
- In yet another organization, it was normal for work that was not completed in a sprint to be added to the following sprint, without displacing items in that next sprint. As a result, the teams could rarely complete work in the course of a sprint. In effect, the planning process pushed an increasing amount of work forward into later sprints, like a snowplow.
- In almost all organizations at the early stages of the journey, there was a tendency to undertake too much work in an iteration. One firm has adopted a rule that a team should only plan to use 70 percent of the available time in any iteration, so that it has time for learning and dealing with unexpected contingencies.
- Most firms involved in large-scale implementations have experienced “code stops” when all new work had to be brought to a halt, because the system had become internally inconsistent and engineers at the center needed to figure out what had gone wrong. Such experiences have underlined the importance of rigorous testing and the avoidance of the build-up of technical debt.
- In one instance, a firm “lost a year” in its journey, as a unit was directed to help with a major project that ultimately had to be abandoned.
- In another case, a firm regressed for several years when a high-performing unit was asked to take over the management of a unit that was having problems.

These setbacks were seen as learning experiences and didn’t discourage the leaders from continuing on their transformation journey, which they saw as crucial for the future.

The journey itself creates learning

One firm experienced a significant outage one year ago. The database went down and because of the tight dependencies in the sub-systems, it affected other functionalities. The IT group used that experience to educate the senior management team on the implications of continuing to make “minor tweaks” in an interdependent system.

The IT team helped senior management become aware of the importance of “technical debt” and the importance of an integrated architecture, with a sound design, evolving with continuous integration and automated testing. They saw how the accumulation of technical debt leads to increased support costs, difficulty in adding new features, unwanted complexity, and ultimately

complete system outages. This enabled conversations to take place about the pros and cons of replacing outmoded systems and what is involved in avoiding the creation of new technical debt. These conversations helped accelerate the journey toward management practices such as Agile and Scrum.

D. Aspects of the new management practices

The challenges of distributed teams are being addressed

All firms favor colocation of teams where practicable. Yet distributed teams are an inevitable business reality, given the need for local expertise on some issues and the need to be close to the customer. Historical reasons, such as mergers and acquisitions, also account for a considerable proportion of distributed teams.

The firms are using tools to enhance continuous communication with distributed teams — emailing, texting, shared screens, audio and live videoconferencing — and they encourage live participation in daily stand-ups.

Yet even with all this technology, face-to-face is still seen as key. For instance, one European firm makes regular visits to its suppliers in another continent, knowing that if they treat teams in those suppliers with lower interest or priority, it will become a self-fulfilling prophecy that the teams will perform at a lower level. Moreover, the two groups exchange staff and embed them in the other organization for up to a year to foster cross-fertilization and commonality of purpose.

The most mature teams routinely complete work each iteration

All firms aspire to complete work at the end of each iteration, without errors or flaws, in accordance with the thinking of Agile, Scrum, and Lean. The most mature teams routinely accomplish this, with work being “done” in the sense of being completed and all dependences resolved; tested at the level of the feature, the unit, and the overall system; along with documentation and communication provided to users.

In the very early stages of implementing the new management practices, there was often a lack of common understanding as to what was meant by “done” or what was involved in getting to “done.” Teams would submit work as “done” when in fact there was a significant backlog of unresolved issues or quality problems inherent in the work. The first step in the process was to reach agreement on a common definition of “done” and to accept that the object was to do work that met the definition of “done” on a routine basis with every iteration.

In the early stages of the journey, the definition of “done” tended to be less comprehensive, e.g., “Code is complete, unit tested by the team that wrote it, and the code is in integration.” Where work is being done by multiple teams that are not using the same management practices (e.g., Scrum vs. Kanban), are not on the same cadence, or are working on components rather than features, it can be difficult to achieve the more comprehensive definition of “done” on a routine basis. This can create the “snowplow” effect, with uncompleted work being pushed into subsequent iterations and the pile of uncompleted work steadily growing.

As the journey continues, mature implementations have been able to resolve these problems by an insistence on the more comprehensive definition of “done”; by having teams adopt the same management practices and the same cadence; by defining most work in terms of “features” rather than components; by having teams resolve all dependencies in the course of an iteration;

and by completing automated testing at the level of the feature, the unit, and the system in the course of an iteration.

However, in very large implementations, one member found that continuous integration at the system level was not practical at the level of the team, given the amount of time involved in completing all tests with a full load. In that instance, continuous integration and testing at the system level is managed by a central group, which applies a series of tests with progressive levels of load.

Information radiators are pervasive

In confronting uncertainty, complexity, and risk, these organizations are involved in a journey of self-discovery. As one manager told us, the goal of metrics is "to reveal the organization to itself."

The use of "visual radiators" is pervasive in these organizations. It is striking to be able to walk into the area of any work group and be able to see at a glance the status of work in the group, including what is going well and where there are problems.

Paper-based tools for radiating information are remarkably prominent

One remarkable aspect of several site visits was to see how prominently, even in the most high-tech environments, paper-based planning tools are being used to radiate information in the workplace. Both managers and staff reported that moving a paper card on a board somehow feels "more real" than making a computer entry in a system.

Communities of practice are pervasive

A prominent feature in all the firms is the presence of informal horizontal groupings of staff with common interests or experience. They are called variously "communities of practice," "guilds," or "tribes." These groupings are supported but often not driven by the firm's management. It is a chance for interested parties to network and "see what bubbles up." The groupings are important because they communicate several messages. Sharing knowledge is good. Experimentation is encouraged. The managers don't necessarily have the answers.

Hackathons and similar events are common

Most firms are conducting massive hackathons and boot camps with the object of underlining the importance that the firm attaches to innovation and drawing on new ideas from anywhere in the organization.

Customer-focused design thinking is vital

In varying degrees, all firms put emphasis on understanding user and customer needs prior to doing work. One firm makes "high-tech anthropology" a requirement of all its engagements, with a systematic assessment of users in the field so as to understand not only what the customers say they want but also what users actually need.

In effect, the new management practices are design-led. They establish precise needs for what is being developed and put the user experience as the highest goal. It is only when the needs are understood that work can begin to match that need in an uncompromised way. Anything that does not support the design has to be paired back, or removed altogether. Design thinking

requires laser focus, confidence, and a culture that is tolerant of the occasional failure. If the product is developed and turns out not to meet the need, perhaps because the scene has changed, the firm has to have the confidence to kill it. In the new management practices, everyone, including the engineers, shares the common goal of adding value and delighting the customers.

Work-life balance

All the LC firms, in their own ways, are aiming to achieve work-life balance for their staff. One firm, for instance, shuts the office at 6 pm and doesn't open on weekends, effectively imposing a 40-hour workweek on its staff. It can only do this because of the agility of the planning processes and the high quality of work being accomplished; there has been no "emergency" at that organization for many years.

This in turn is possible because the new management practices enable the work to be planned and executed so as to ensure steady completion of work in a predictable fashion, even as the market changes in unpredictable ways, without the major crises that inevitably flow from doing work in a bureaucratic fashion, with the unrecognized build-up of technical debt and the inability to change direction as priorities change in unexpected ways.

E. The role of managers

Managers are not obsolete

Despite the widespread discussion of self-organization, self-management, self-governance, and "inverting the pyramid," managers still play a central role in all these organizations. Even with an extreme example, where managerial titles have been abolished and there is large measure of self-governance by those doing the work, including recruitment, performance evaluation, promotions, and the programming of work, the role of the founders in establishing "the rules of the road" is very evident. For instance, in that firm, the practice of doing all work in pairs is a rigid requirement established by the founders. Setting direction for the future and succession planning are other areas where the role of the owners is central.

The role of middle management is being clarified

The firms are learning that the role of middle management in the new management practices needs to be clarified. In one firm, it was thought that the new management practices involving autonomous teams would require fewer managers and, as a result, a number of managers were let go. The firm soon realized that this was a mistake, and managers had to be re-recruited.

In effect, the role of managers shifts rather than disappears. The task of *enabling* the team to achieve its goals, without *controlling* how the team does its work, is not a trivial task. Nor is the determination of client priorities, or the systematic removal of impediments to the work of the teams or ensuring that quality assurance practices are being fully implemented by the teams.

The firms visited are also recognizing that more deliberate steps are needed to explain to managers what their roles comprise with the new management practices. It is insufficient to tell managers what they should stop doing (controlling) without explaining what the new role comprises (enabling).

The management practices are both durable and fragile

Despite setbacks in the course of the various journeys, the new management practices are showing considerable durability. One firm has been operating with the new management practices for 14 years, another for 9 years, and another 7 years, some at very large scale. Yet as noted above, the management practices are also fragile, in the sense that they are vulnerable to disruption from the intrusion of different managers with traditional management mindsets.

The new management practices stick to individuals

The site visits confirmed that once the new management practices are mastered, managers and staff find it difficult to envisage ever going back to the old management practices of hierarchical bureaucracy, with individuals reporting to bosses and workers being told how to do the work. In this sense, the new management practices appear irreversible at the level of the individual, regardless of what the organization decides to do in future.

The role of future planning

As the new management practices enable rapid shifts in direction to meet changing needs, they create a risk that agility comes to be seen as a replacement for strategy. The site visits indicated a risk of assigning lower priority to longer-term strategic thinking. One firm, for instance, reviewed its activities and saw that 95 percent were focused on work with a short-term horizon, and only 5 percent on work with a medium-term horizon. In effect, it was doing no work on work that would produce major, long-term gains. It therefore set out to change the balance; after a year and a half, it had 20 percent of its activities focused on medium- and long-term goals.

Another firm maintains a balance of maintaining and improving its ongoing operations in tandem, with a massive multimillion dollar initiative that aims to transform the market for its services.

In general however, medium- and long-term planning was not prominent on the site visits. While it is possible that strategic thinking was occurring elsewhere in the organization, it is possible, given the high degree of disruption in the marketplace, that more attention to future planning might be warranted in future. This could be led by the top management but carried out in an inclusive manner, so that insights from the whole organization can be incorporated.

The role of customer feedback

Although almost all firms are in constant contact with their customers, the use of systematic measures of customer satisfaction, such as the Net Promoter Score, was not prominent in the site visits.

The risks of traditional management thinking reentering the organization

Although the new management practices were visible in all the site visits, traditional management thinking is still pervasive in large organizations and in business schools. The lack of broader acceptance of the new management practices in the management world as a whole constitutes a continuing risk that managers imbued with the traditional management mindset will come into the organization and systematically undo the cultural changes that have been so deliberately put in place. The current state of management education about the new management practice is insufficient, and what is available is often incomplete and confusing.

Constant vigilance is exercised in recruitment to ensure that the gains of the new management practices are not lost by accident.

F. Detailed findings

		Findings of the Learning Consortium Yes = ○ Partly = ◖ No = ● Not available or not relevant: = ∗								
	Organization	A	B	C	D	E	F	G	H	I
	A. HOW THE WORK IS DONE									
1	Work is increasingly performed by autonomous teams.	●	○	○	○	◖	◖	○	○	○
2	Daily standups are now an almost universal practice.	○	○	○	○	○	○	○	○	∗
3	Teams work in an iterative fashion.	○	○	○	○	○	○	○	○	○
4	The teams work in sprints of 1, 2, 3, or 4 weeks or daily.	Daily	3wk	3wk	∗	3wk	2wk	1wk	∗	1wk
5	The teams in the unit work in iterations (sprints) with the same cadence.	○	○	○	○	◖	◖	○	∗	∗
6	Paper-based planning tools are prominent.	○	●	●	○	●	○	○	●	◖
7	Teams have a product owner or equivalent.	◖	○	○	○	○	◖	○	○	○
8	The team has a coach (or Scrum Master) to facilitate the work of the team and identify and resolve impediments.	◖	○	○	○	◖	○	●	∗	∗
9	The teams perceive themselves free to decide how the work is done.	◖	◖	○	○	◖	◖	○	○	○
10	The teams use pair programming or pairing.	●	◖	◖	◖	◖	◖	○	○	○
11	The teams are self-forming.	●	◖	●	●	◖	●	◖	◖	○
12	The teams are self-governing.	●	●	●	●	◖	●	○	◖	○
13	The teams routinely produce finished work at the end of each iteration.	○	○	○	○	◖	◖	○	∗	∗
14	The teams routinely achieve continuous integration of their work at the end of each iteration.	◖	○	○	○	◖	●	○	∗	∗
15	The teams routinely deliver finished work at the end of each iteration to a customer or customer proxy.	◖	○	○	○	○	◖	○	∗	∗
16	The teams routinely receive feedback from a customer or customer proxy at the end of each iteration.	●	∗	○	○	○	◖	○	○	○
17	The teams conduct regular retrospectives at the end of an iteration.	○	○	○	○	○	○	○	○	○
18	The teams perceive themselves as implementing Agile or Scrum or an evolution or variant thereof.	●	○	○	○	○	○	●	○	○

19	The teams perceive themselves as implementing Lean or an evolution or variant thereof.	○	●	●	○	◖	●	●	◖	●

		Findings of the Learning Consortium Yes = ○ Partly = ◖ No = ● Not available or not relevant: = ∗								
	ORGANIZATION	A	B	C	D	E	F	G	H	I
20	The teams perceive themselves as explicitly implementing DevOps, Continuous Development.	●	●	○	●	◖	●	●	●	●
21	The management perceives the teams as autonomous.	◖	○	○	○	◖	◖	○	○	○
22	The teams regard themselves as autonomous.	◖	◖	◖	○	◖	◖	○	○	○
	B. COMMUNICATIONS									
23	Communications are interactive, both vertical and horizontal.	○	○	○	○	◖	◖	○	○	○
24	In general, the teams feel free to say what they think to management.	○	●	○	○	◖	◖	○	○	○
26	The priority accorded to transparency is visible in the work of the teams.	○	○	○	○	◖	○	○	○	○
27	The unit/organization systematically communicates “the voice of the customer” to the teams.	◖	○	○	○	○	◖	○	○	○
	C. GOALS AND VALUES									
28	The organization is totally focused on delighting the customer/user, with everyone doing the work having a clear line of sight to the customer.	●	◖	◖	○	◖	◖	○	○	○
29	There is no tension between the way teams in the unit that was visited are run and the way the whole organization is run.	◖	◖	◖	○	◖	◖	○	○	○
29	The organization as a whole is explicitly committed to continuous innovation to delight the customer as the primary goal of the organization.	◖	◖	◖	○	○	◖	○	◖	○
30	The unit/firm focuses tightly on delighting the ultimate end user, not just the intermediary customer or the internal customer.	●	◖	◖	○	◖	◖	○	◖	○
31	The unit/firm conducts hackathons and similar events to stimulate innovation.	○	○	○	○	◖	◖	○	○	○
32	The unit encourages knowledge sharing, through “communities of practice,” “guilds,” or “tribes.”	◖	○	○	○	○	○	○	○	○
33	The priority accorded to innovation and continuous improvement is incorporated in the work of the teams.	○	○	○	○	◖	●	○	○	○
34	Innovation and continuous improvement include improvements in efficiency.	○	○	○	○	○	○	○	○	○
35	Innovation and continuous improvement are mainly focused on improvements that add fresh value to customers (not just improving efficiency).	◖	○	○	○	○	◖	○	○	○

		Findings of the Learning Consortium Yes = ○ Partly = ◖ No = ● Not available or not relevant: = ∗								
	ORGANIZATION	A	B	C	D	E	F	G	H	I
36	The priority accorded to innovation and continuous improvement beyond the short-term is systematically incorporated in the work of the teams.	○	○	◖	◖	○	◖	◖	◖	○
	D. METRICS									
37	The unit/organization makes systematic use of “information radiators.”	○	○	○	○	○	○	○	○	○
38	The unit/organization makes systematic use of Net Promoter Score methodology.	●	●	●	●	○	●	●	●	●
39	The unit/organization disseminates the results of the Net Promoter Score to the teams.	●	●	●	●	○	●	●	●	●
	E. LEARNING									
40	The unit/organization explicitly structures the work so as to accelerate team learning, even at the expense of team velocity.	●	●	◖	◖	◖	◖	○	◖	○
41	The unit/organization allocates resources to encourage systematic learning by team members.	◖	◖	◖	○	○	◖	○	○	○
42	Team members can choose how to allocate resources for their own learning.	●	●	◖	○	◖	○	○	○	○
	F. OVERALL									
43	The site visit was representative of the organization as a whole.	◖	◖	◖	○	○	◖	○	○	○
44	The site visit included unscripted meetings with staff.	●	●	◖	○	◖	○	○	◖	○
45	People here are confident about their future at the firm. (No = Very uncertain about their job; Partly = Some uncertainty about the future of the firm or their job; Yes = Very confident in the future of the firm and their job)	○	◖	◖	○	◖	○	◖	○	○
46	People here are joyful at work. (No = Disgruntled and disengaged; Partly = Engaged; Yes = Passionate, joyful, see their work as a calling)	○	◖	◖	○	◖	◖	○	○	○

Appendix A: What is the Creative Economy?

The Creative Economy is the economy comprising organizations that keep generating new products and services by continuously adding value and delighting their customers.

It may be contrasted with the Traditional Economy — the economy that comprises organizations operating on principles of hierarchical bureaucracy and, in the case of public companies, usually focused on maximizing shareholder value as reflected in the current share price.

Traditional management practices helped organizations in the twentieth century meet the demand for mass-market products and services and generated unprecedented material prosperity for many. But then the world changed. Deregulation, globalization, and new technology, particularly the Internet, transformed everything. The old ways of getting things done became less and less effective, as power in the marketplace shifted from seller to buyer and firms increasingly found that success depended on deploying the talents and creativity of those doing the work to deliver innovation and delight their customers.

Over the last 15 years, tens of thousands of leaders all around the world have been creating workplaces with very different leadership and management practices. These workplaces were initially most evident in Agile software development. But these practices are now spreading to all parts of the organization and across all sectors of the economy, particularly as software itself has become a key driver of business success. These leaders are not just tinkering with the management practices that were once successful. They are creating workplaces with a culture of agility, with different goals, practices, and values, as part of the Creative Economy.

The distinction between the two economies is not a distinction between old firms and new firms. The Creative Economy includes young firms and old firms, big firms and small firms, digital and non-digital firms. It is global in nature, although there are concentrations in specific geographical areas. It also includes many hybrids, in which part of the firm is run in one mode and the other part in the other. Thus the Creative Economy isn't about a type of firm but rather a set of leadership and managerial goals, practices, and values that are transforming our world.

Richard Florida credits *Businessweek* with introducing the concept of the Creative Economy in August 2000. Florida expanded on the theme in his book *The Rise of the Creative Class* (2002). "Today's economy," he wrote, "is fundamentally a Creative Economy."

In his book *The Creative Economy* (2001), John Howkins wrote about 15 "creative industries" that had emerged. Don Tapscott discussed the growing scope and potential of these phenomena from an economic perspective in his books, *Wikinomics* (2006) and *MacroWikinomics* (2010).

Over time, it has become apparent that the Creative Economy is more than a class of creative workers or a set of creative industries. It constitutes an ongoing transformation of the entire modern economy and society, eventually affecting every person and every organization.

Appendix B: Scope of the Learning Consortium

The Learning Consortium set out to explore the leadership and management practices of the Creative Economy. The primary focus was on:

The structure of work. Shifts from individuals reporting to bosses to self-organizing teams; networks; platforms; and ecosystems of staff, partners, and customers, delivering value directly to customers.

The coordination of work. Shifts from bureaucratic approaches to coordinating work, with roles, rules, plans, and reports, to customer-driven iterative practices including, but not limited to, Agile, Scrum, Lean, DevOps, Continuous Development, Design Thinking, and Holacracy.

Communications. Shifts from primarily vertical, top-down communications to interactive conversations, both vertical and horizontal, with staff, partners, and customers, including social media.

The role of organizational goals. The Consortium will explore the relationship of practices aimed at continuous innovation to the goals of the organization, including whether organizational goals are advancing, neutral to, or restraining continuous client-driven innovation.

The role of organizational values. This will include the relative importance of innovation, transparency, and sustainability as compared to predictability and efficiency in the practice of innovation management.

The role of metrics. The Consortium will explore the role of metrics, including whether metrics are advancing, neutral to, or restraining continuous customer-driven innovation.

The portfolio approach to innovation to ensure an array of genuine market-creating innovations, as well as efficiency or performance-enhancing innovation.

The role of systemic change. The Learning Consortium will explore to what extent these goals, practices, and metrics constitute a grab bag of unconnected innovations or a coherent constellation of leadership and management practices.

The role of organizational learning. The Learning Consortium will explore the role of systematic training, learning, and sharing of knowledge in the Creative Economy.

Appendix C: Profiles of the companies visited

1. agile42

agile42 is a 50-person international consulting group that places Agile coaches inside companies of various sizes. Since they are a distributed (virtual type) company, their operations are quite lean and not available to directly observe or tour. One of their founders stated they indeed "eat their own dog food" and do operate with Agile principles and practices. agile42's coaches engage with organizations of various sizes, up to and including units of large multinational banks with 60,000 employees, to aid clients in their Agile transformations.

agile42 states that they are specialists, that they conduct nontraditional consulting, so much so that one of the founders said, "We are not business consultants." Instead, they suggest that they are in the business of "helping clients solve their own problems." Providing a repeatable consulting framework and specific structure is necessary only to the extent that it produces the desired new behavior. agile42 says they are in the business of "taking people from where they are" to where they desire to go on this new management journey.

As a services company, the agile42 practice is naturally driven and focused on their client's needs. The services agile42 provides are fluid. Each coach can experiment with their client and creatively tailor services to uniquely fit. Experimentation is valued. agile42's approach is less prescriptive and methodological and more organic and emergent, focused on addressing the client's needs. There is some general methodology recommended, which typically includes an initial assessment, strategic planning, training, and coaching.

agile42's model is that experience and belief underlie and support action and results. It was expressed that coaching organizational change occurs through a type of influence (not direct power). In order to do that, coaches "create an experience that establishes a belief, so that action can be identified, which creates results." Therefore mindsets among their clients are intentionally addressed. agile42 coaches say they address the complex nature of an organization's transformation to agility using a guiding principle from Peter Drucker that "culture eats strategy for lunch."

With coaches embedded in many organizations, agile42 has a front-row seat to the breadth of demands for organization changes required for the Creative Economy, which has yielded insights into the new management methods that are being applied and the challenges and opportunities in executing such organizational changes.

2. Brillio

Brillio Technologies is a spin-off from Collabera, a leading in IT Services Company founded in 1991. Brillio as an independent entity was reborn in 2014 as a global technology consulting, software, and business solutions company, enabling the successful transformation of businesses facing significant disruption fueled by technology and cultural change. The company utilizes emerging technologies to create new customer experiences, achieve cost efficiencies, and gain competitive advantage.

It is on a transformation journey as a digital ecosystem with a focus on technology and domain solutions. Brillio works with organizations in Asia, Europe, and the U.S., operating with around 2,000 staff mostly located in Bangalore, India; the U.S.; and Europe. Brillio proactively

collaborates with clients and partners in a nontraditional manner in which risk, technology/IP development, and the outcomes are shared. Employing Agile principles and methodologies provides significant business advantage to their customers through continuous value delivery.

At its core, Brillio is powered by a strong customer-centric, co-innovation philosophy and an entrepreneurial, collaborative culture that challenges the basic tenets of how technology consulting organizations partner with customers in the digital era. Brillio leverages emerging technologies such as Mobility, Advanced Analytics, Artificial Intelligence, Augmented Reality, and Machine Learning techniques to create actionable innovation for enterprises that results in significant business impact.

Brillio views its work by considering three horizons of growth: short-, medium-, and long-term. In 2014, it noticed that 95 percent of its activities were in Horizon One, and only 5 percent in Horizon Two. It set out on a transformation journey with the goal of expanding its activities in Horizons Two and Three. This involved shifts toward becoming more client-centric than process-centric, with time to market being the driver rather than process, a culture of DevOps rather than traditional development cycles, and self-governance within broad guidelines rather than compliance with the policy as the way of getting work done. By August 2015, Brillio had more than 20 percent of its activities in Horizons Two and Three.

Brillio drives empowerment of its staff through the practices of collaborative goal definition; self-governance; steadily increasing P&L independence for units; agility in action; autonomy in allocating resources for learning; and accelerated approval, recruiting, and client onboarding processes.

3. C.H. Robinson

C.H. Robinson is a transportation logistics company founded in 1905 to move produce from California to eastern destinations. In the 1980s, when the American trucking industry was deregulated, C.H. Robinson expanded into many facets of transportation. They are now a global company involved with trucks, rail, air, and sea transport. Revenues for 2014 were $13 billion.

C.H. Robinson now operates in 281 offices in 38 countries with 13,000 mostly U.S.-based employees. About 12,000 employees are in branch offices, 700 are in back-office operations, and 600 are in IT. At any given moment, there are about 6,000 people making decisions and negotiating agreements about moving freight.

C.H. Robinson owns no transportation assets. Their revenues come from negotiating transportation logistics between customers who have something to ship and carriers who have space to carry. At the heart of their business is the IT platform “Navisphere” that allows their people to have the best and most timely information on rates and availability of carriers. Through that information, people negotiate profitable transportation alternatives. Some of the rates are pre-set as tariffs. Many of the rates vary. Navisphere also gives visibility to customers of the status of their shipments, a decided plus from the customers’ point of view.

The Navisphere platform is an integrated platform (tying together various proprietary systems, including those acquired through acquisitions, as well as upgrades) that offers “global visibility, comprehensive optimization, actionable intelligence, broad connectivity, and trusted performance.”

C.H. Robinson is in the challenging position of “building the plane while they are flying it.” On the one hand, they have a serviceable platform of different IT systems that exist within an overall shell. There is seamless integration of data between the systems. On the other hand, much is bringing together different systems with different user experiences, which gives the appearance of a far less integrated system. So the IT team at C.H. Robinson is trying to improve their integrated platform by giving the user a seamless experience, while maintaining ongoing functionality to internal users as well as external customers.

The journey to integration is an evolution of Agile practices. At this point, some teams are Agile, most using Scrum. Many of these teams are “doing Scrum” but haven’t adopted an Agile mindset. Interestingly, the champion for Agile has to try to move forward with those perhaps a bit resistant to Agile concepts, while at the same time holding back the new converts to Scrum who are so “pure” in their orientation that that they create even greater resistance from those who aren’t yet on board.

For C.H. Robinson, the journey to the Creative Economy started a few years ago with a few rogue teams and is just starting department-wide, and is a work in process. This shift was driven by a new leader who empowered the Agile champion.

4. Ericsson

Ericsson is a world leader in the rapidly changing environment of communications technology — providing equipment, software, and services to enable transformation through mobility. Some 40 percent of global mobile traffic runs through the networks they have supplied. More than 1 billion subscribers around the world rely every day on networks that it manages. With more than 37,000 granted patents, it has one of the industry’s strongest intellectual property rights portfolios.

Ericsson at Athlone boasts the biggest Java development site in Ireland, with leading-edge Agile software development methods. And, as they say on their website, the team approach means “you are never on your own in a pickle.” The Athlone site has had a $12 million renovation to increase mobility and encourage teamwork; development teams work in pods, with team meeting areas that include stand-up small meeting tables and “information radiator” screens and/or manual boards. At the Athlone site, there are 80 Agile teams working on the next-generation product that will be released in about 18 months.

The teams are encouraged to be autonomous and self-managed. Autonomy happens by leadership specifying the constraints on teams (about seven people, cross-functional) and then letting the engineers organize themselves according to those constraints.

Ericsson strives for persistent Agile teams, saying, “We found that high-performing teams may take one to two years to develop.” Over time, the following practices have evolved:

- One Scrum Master per team
- One Product Owner for two teams
- One Line Manager for four teams, attends every sprint-end demo
- Sprints are three weeks

- The Scrum Master's "primary role is to hold a mirror up to the team" and remove impediments, but not so aggressively that the team becomes dependent on the Scrum Master

- Scrum Masters are selected/elected after the team is self-formed and by the team itself

Ericsson is a leader in scaling Scrum to large enterprise projects.

5. Magna International

Magna International is a leading global automotive supplier with 287 manufacturing operations and 81 product development, engineering, and sales centers in 29 countries. They have more than 124,000 employees worldwide. The company was founded in 1957 and has been publicly traded since 1962. Annual revenues in 2014 were about $36.6 billion. It is the second-largest global supplier to automobile OEMs.

Deep in the culture of Magna is the notion that each plant should be run in an entrepreneurial manner. Plant managers have considerable freedom to run their plants as they see fit, as long as they are aligned with the current strategic initiatives of world-class manufacturing, innovation, and commitment to the development of people.

The Learning Consortium visited the Magna International facility in Barcelona. The plant focuses entirely on interior and exterior mirrors for automobile OEMs. The facility was in difficulty some years ago, as the then-leadership team had been asked to mind not only the mirror plant but another acquisition close by. The leadership team ended up being stretched beyond its capacity.

A new leadership team has been running the Barcelona plant since end 2008. They have exited the acquisition and successfully brought a lean manufacturing approach to mirror production. After being on the corporate "radar screen" for poor performance for some years, the Barcelona facility now ranks as one of the best run in Magna.

The leadership facility has instituted many Scrum practices in their manufacturing processes. Daily stand-up meetings help teams align around priorities for the day and give visibility to any problems or issues that might impact downstream teams. Each team is itself organized in "U-shaped" enclaves along the production line, so that communication among team members is made easy. Manufacturing teams work on a "pull" approach, and the shop floor is organized to make work status is visible to all. As the plant manager said, the key to transforming the world of work is first to "change mindsets."

6. Menlo Innovations

Menlo Innovations, in Ann Arbor, Michigan, is a 50-person software design and developer for custom software applications, mostly for business-to-business purposes, that often are mission-critical, such as medical and health related. Menlo Innovations has reached international attention because of its innovative culture and the success its cofounder Richard Sheridan has had in spreading the word about its unique values and practices, such as through his 2013 book *Joy, Inc.: How We Built a Workplace People Love*.

Menlo attracts about 4,000 mostly paying visitors a year from around the globe to visit and learn how Menlo has done this, something that Sheridan dubs “industrial-tourism.”

Menlo’s cofounders were highly experienced software developers and managers before founding Menlo in 2001. They committed to an experiment that would create an environment as a haven for people like themselves — namely, a company that not only creates software but that they themselves would love to work in. Some lessons from an experiment inside their former large software employer were applied and refined experimentally in the early years. Over time, the values, practices, and processes became quite settled, accepted, and sustained enthusiastically by all Menlo company members. Sheridan speaks to the structure/freedom dynamic by describing the Menlo way as a “tyranny that allows for freedom.” Menlo developed their work methods before many of today’s work methods such as Scrum or XP were well known. Since Menlo’s founding pre-dates much of that conversation, Menlo prefers to describe their method simply as “The Menlo Way,” which borrows ideas from many sources, including Lean, Six Sigma, and the Project Management Institute.

The Menlo Way includes participating in a daily morning all-hands, standing-circle meeting where every pair of team members checks in on what they are doing as well as what all other company members are doing. All work in the company is conducted in pairs, up to and including the founding partners. No line of software code can be written alone. The software programming pairs are explicitly not persistent; they change every week. This constant reshuffling has the effect that the entire company is actually a single persistent team, rather than a set of sub-teams. Menlo works only on stand-alone, new projects. All software code is their own code, written in their own self-obvious and clean code style (for example, no commenting is needed). Reusing parts of a client’s existing code may save time, but Sheridan firmly believes that a far greater cost will be incurred to untangle and maintain that mixed code.

The work practices reflect what some call the code craft movement, with pride-filled craftsmen joyfully executing their art for the delight of their consumers.

Menlo reflects a consideration of the basic human characteristics that are desirable in such a workplace. Their interviewing method intentionally screens first for this human aspect by observing a candidate in a simulated work environment. Second round, the candidate is screened for skill and other aspects by working on an actual billable client project (in pairs, of course) and is paid for the day.

It is not all “rainbows and unicorns,” as Sheridan calls his positive outlook on life. There is still refinement to do in some areas, including succession planning, transparent finances, and careers and decisions on pay. Sheridan also sees that his own journey from being a “manager by fear” to a “manager by joy” is still not complete. Menlo is highly intentional about fostering consistent, values-based behavior in order to build trust, and that trust is delicate and must be vigorously protected and maintained.

Menlo also helps sponsor an early-stage tech start-up incubator, colocated with their offices. In some cases, Menlo makes an investment by helping develop a start-up’s product in exchange for participation in the company. The strategy has already had some success, as one former startup with a medical research device was sold for around $205 million. Menlo employees participate in a profit-sharing bonus pool, and such windfalls contribute toward that pool. With financial outcomes like this, visitors are paying Menlo to learn the Menlo Way. Menlo’s ability to

attract and retain talent and their regular flow of clients are demonstrating that making joy front and center has remarkable business value.

7. Microsoft

Founded in 1975, software company Microsoft is best known for its Windows operating system, Office productivity suite, and Xbox gaming. It had 2014 revenues of around $86 billion and 128,000 employees. The Learning Consortium visited the Developer Division ("DevDiv"), which has about 4,300 employees and is responsible for making Visual Studio and related applications, which software developers worldwide use themselves in their daily work. Within that group the LC spent time with the group responsible for Visual Studio Cloud services, which consists of 467 people and 35 teams, each organized around a common set of software features.

Until five years ago, software development cycles took a conventional "waterfall" approach and new releases were typically every two years. Economic conditions have changed as software is being delivered immediately over the Internet. This has pressured Microsoft to make changes to their practices to realize benefits with faster delivery cycles. DevDiv took the initiative and began experimenting in a few teams in their group with new Agile development methods such as Scrum. Success with a few prototype teams led to a larger change across the entire division. There followed several years of learning how to operate a product development unit across many teams, a process Aaron Bjork, principal group program manager within the Developer Division, describes as a journey that is anything but a straight path from A to B. Now all 4,300 in the division are operating in an Agile team manner.

The transformation to Agile development at DevDiv has impacted every aspect of the work environment. Changes include completely remodeling several office buildings and transforming them from individual offices to collaborative team rooms. DevDiv experimented with different physical layouts. The first iteration was pure "open space" with large areas and very few walls. This configuration, however, did not lead to the open communication they desired; instead, it created "the library effect," where people felt the need to be quiet instead of actively collaborating. So another remodel was done to create separate team rooms, each equipped with reconfigurable rolling desks; team space meeting areas of various sizes; and outside windows for each group space. This model was then rolled out to a couple of other DevDiv buildings and is believed to be a model for Microsoft as it considers remodeling around a hundred other buildings.

The challenges of transforming the physical space are not viewed as the most difficult. Aaron describes the transformation being as much an art as a science, and it must include a shift in mindsets for all involved. Aaron draws inspiration from Daniel Pink's book *Drive*: "Let us give our teams three things … Autonomy, Mastery, and Purpose." For that to occur, an entire new balance of power between management and team-level work must be found and carefully maintained. This balance Aaron describes as that between the directives prescribed by the wider organization, which he sees contained in the concept of "alignment," and the capacity to self-organize and execute as best discovered by the teams, which he sees as "autonomy." The elements that make up alignment include "organization, roles, teams, cadence, and taxonomy"

(taxonomy referring to clarity on the shared meaning of their internal language used to describe how they work together). In the domain of autonomy rests aspects of the work such as the plan and the discrete practices teams derive and apply.

The impact upon their organization design has not simply been at the team level but includes broad structural changes that were found to better enhance their new structure. For example, in the past they organized around three work flows: program management, development, and test. In the new organization, development and testing have been integrated under “engineering.” Additionally, what were once separate functions for user experience (UX) and user interface (UI) are now integrated with program management. On the back end, service delivery has been integrated into engineering.

In this new organization, teams have the autonomy to be the masters of the features they deliver, and a virtuous cycle can be seen where a more effective and engaged workforce operates faster, with better quality. They are more readily able to connect with and understand customer’s needs and respond faster, so that customers are regularly delighted. In the past, boxed products were released so slowly that by the time the customers received them, there was already a large list of improvements known to be needed. Yet customers would have to wait another couple of years to get what they wanted. Now this cycle has been radically transformed into three-week delivery cycles. DevDiv also maintains on-line a list of new requested features that customers and developers together can carry on a conversation about, and even vote on, so the product evolves with continuous social inputs from their daily users. With cloud-based software, it is also easy to measure the adoption and use of features to keep development in line with customer needs.

When taken together in their entirety, these elements represent a radical cultural change that impacts all aspects of behavior and mindsets. Even so, Aaron reports that in a company as vast as Microsoft, this new management paradigm is still potentially fragile.

During the tour we randomly spoke with one developer, an engineer team member who has been around for the entire Agile journey, with many years operating in the old ways and now four years with this new way. We asked him, “How has this transformation gone for you?” He answered candidly, as engineers are prone to do, “It has not always been easy.” We followed up, “Would you go back to the way it was before?” He replied with a smile: “No way!”

8. Riot Games

Riot Games is a privately held online gaming company. The company was formed in 2006, and the cofounders are still involved in leadership roles. The first release of their *League of Legends* was in 2009. Growth, in terms of users, has been explosive. More than 67 million users play the game each month. In 2010, the first “world championship” of *League of Legends* was held in an auditorium in Stockholm, with 300 people paying to watch the competition. In 2014, 68,000 people paid to watch the world championship finals at the Staples Arena in Los Angeles. An additional 32 million viewers watched online — making the audience for the *League of Legends* world championship larger than that of the World Cup Final plus the NCAA Final Four Final, combined!

The company is a “DNA culture” company — that is, the culture of the company, which puts them squarely in the Creative Economy, was conscious, intentional, and baked in right from the start. The company manifesto consists of five simple principles:

1) Player experience first

2) Challenge convention

3) Focus on talent and team

4) Take play seriously

5) Stay humble, stay hungry

These principles are manifested in the way Rioters work. Virtually all Rioters are themselves serious gamers. As enthusiasts, if they build something they like, there is a good chance their community will like it as well. At the same time, Rioters are constantly seeking and responding to online feedback and input they get from gamers at the many different events they sponsor.

There is constant innovation at Riot Games. Some of it is incremental improvement in the game. Some of it allows Riot Games to move into adjacent market spaces. Some of it may very well prove to be disruptive to how "training" and "learning" takes place in organizations and even in educational systems.

9. Solutions IQ

SolutionsIQ (SIQ) is a 175-member international consulting group whose primary business is providing Agile consulting to Fortune 1000 companies. SIQ also conducts related public and private training courses and Agile software development. The practice of helping other companies develop Agile capabilities has resulted in SIQ becoming, at first accidentally but then deliberately, an Agile company. SIQ has developed and operates as an Agile company.

SIQ began in 1979 as a regional IT staffing firm and began experimenting with outsourced software development services in 2000. Within a few years SIQ began to use Agile practices such as Scrum and XP in software development. This internal application of Agile led SIQ to Agile consulting and training services starting around 2006. Shortly thereafter, the company decided to retire all non-Agile services. During the 2009 recession, SIQ's Agile consulting services were growing but the original core business was retracting even faster, and the company came under financial stress. SIQ began company-wide meetings where difficult decisions were made together with staff, and SIQ credits these meetings for helping establish a foundation of shared values based on transparency, empowerment, and collaboration. With their 2014 acquisition/merger with Big Visible, SIQ became what the owners believe is now the largest pure-play Agile consulting group in the world.

Co-owner Charlie Rudd says, "The key to our success is developing a community where knowledge workers engage and thrive. We have learned that when you do that you don't need to tell people what to do. Good stuff naturally emerges." The function of leadership is not to manage people, he says, but to enable, empower, and invite them to share a compelling vision. "Like a dinner party host, the leader produces a comfortable place for conversation and invites knowledge workers to participate." When commitments are freely made, they are lasting and meaningful. The title "manager" has been abolished and replaced by a new role entitled "stewardship." Stewards shepherd a community of practice as caretakers, not taskmasters. Leadership responsibilities are distributed among executive sponsorship, stewardship, and the community of practice, with a bias toward enabling the community of practice to take on more and more responsibility.

Rudd also noted that his own views about empowerment and positional authority have been transformed. “Traditional managers often see responsibility and control in terms of a zero-sum game, where empowering staff means losing personal relevance. However, when staff and leaders share a common vision, their interests become aligned and who holds power is less important than enabling a unified, powerful community.” Co-owner John Rudd commented on the need to shift his own mindset from being a manager responsible for making expert decisions to a leader who helps build agreement by asking, “What do you think?”

Since most of SIQ’s work is done at widely dispersed client sites, SIQ finds it important and valuable to periodically “gather the road warriors” to participate in regional and national community “gatherings.” These gatherings include dinner, games, Open Space conferences, brainstorming, and a “buzz café” where idea collaboration occurs. “The gatherings became the foundation of our community, especially given our distributed nature,” reported John Rudd.

Other community and collaboration activities include biweekly “town hall” conference calls and various platforms to facilitate conversations and collaboration to produce new service offerings and share ideas and client experiences.

Applying the same practices for designing product to designing the SIQ work environment itself, SIQ maintains a working backlog of company improvement initiatives as if these were product features to be developed. These initiatives are available for staff to work, especially for consultants who are between client engagements or at slow times during the holiday season.

SIQ also maintains knowledge capture, storage, and retrieval processes that are maintained by active executive sponsorship. They empower diverse voices and multimodality of data, balanced between special and universal interests. Employee-specific knowledge is also maintained and searchable on their collaboration platform’s employee portal. SIQ utilizes daily, short “sync” meetings for engagement flow tracking that are intended to be a “clearinghouse and not a status meeting.”

SIQ employees have some flexibility to choose between spending their time to increase financial bonuses, professional development, or vacation. Each employee has an annual budget for professional development that they are free to spend as they wish. In addition, joint ownership of IP is offered to all employees who work jointly with the company to produce content and service offerings. SIQ feels that this helps employees feel more connected to their work and allows SIQ to more freely share their ideas and knowledge with the rest of the world.

SIQ believes work environments today require more Agile leadership than ever because of today’s market volatility and complexity. Traditional management approaches designed for a less complex world no longer cut it.

Appendix D: How robust are the report's findings?

How robust are the findings and generalizations in this report? Here is a brief note on the ontological status of the findings.

The LC members are a self-selected set of firms who are interested in the new management practices of the Creative Economy. They are obviously not typical or representative of the entire economy. They constitute a subset of firms who perceive themselves on a common leadership and management journey.

In the nine companies visited, the new management practices were most visible in software development, but the firms themselves are involved in a variety of sectors, such as manufacturing, transportation, health care, logistics, telecommunications, consulting, and coaching. Economic sectors that were not represented included agriculture, energy, and retail.

The findings of the LC depend in part on presentations that were made by the management, but they were in most cases corroborated by informal interactions in unscripted private conversations with those doing the work.

The findings of the LC constitute case-based research. In his article "The Price of Actionability,"[14] Roger Martin argues for a combination of case-based research and rigorous research along a time continuum.

> "The greatest utility for case-based research is not to produce rigorous answers but rather to raise interesting questions. The greatest utility for [rigorous] research would be to take those interesting and action-oriented questions and perform scientifically rigorous research on them."

The findings of the LC should be interpreted in this spirit. They are case-based findings, put forward as hypotheses that warrant further research.

Scrum Alliance invites academic researchers to carry out such research. Any researchers who are interested should contact Scrum Alliance at learningconsortium@scrumalliance.com.

Appendix E: About this report

This report was prepared by the core team of the Learning Consortium for the Creative Economy, which includes:

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The Learning Consortium for the Creative Economy was sponsored by Scrum Alliance. Scrum Alliance is a nonprofit association of more than 400,000 members worldwide. Its mission is to "transform the world of work, by guiding organizations to become prosperous and sustainable, to inspire people, and to create value for society." For more information, please visit www.scrumalliance.org.

Organizations wishing to participate in the 2016 Learning Consortium for the Creative Economy should contact Scrum Alliance at learningconsortium@scrumalliance.org.

[1] https://www.druckerforum.org/2015/the-event/conference-abstract/
[2] Two other companies, SWIFT and hhpberlin, joined the LC but did not offer site visits.
[3] http://www.forbes.com/sites/stevedenning/2012/01/25/shift-index-2011-the-most-important-business-study-ever/
[4] Marc Andreessen. "Why software is eating the world." *Wall Street Journal*, August 20, 2011. http://www.wsj.com/articles/SB10001424053111903480904576512250915629460
[5] http://www.agile42.com/en/
[6] http://www.brillio.com/
[7] http://www.chrobinson.com/en/us/
[8] http://www.ericsson.com/thecompany/company_facts
[9] http://www.magna.com/
[10] https://www.menloinnovations.com/
[11] https://www.visualstudio.com/en-us/visual-studio-homepage-vs.aspx; http://stories.visualstudio.com/
[12] http://www.solutionsiq.com/
[13] http://www.wsj.com/articles/SB10001424053111903480904576512250915629460.
[14] *Academy of Management Learning & Education*, 2012, Vol. 11, No. 2, 293–299.