



AUTHENTISE

WHITEPAPER

Agile Execution, Decision Making &
Traceability in Engineering &
Manufacturing

INTRODUCTION

As elements of digitisation and industry 4.0 evolve, industrial engineering and manufacturing organisations are learning lessons from software development. As a result Agile development processes are increasingly being applied to notions of digital twins, digital threads, workflow and collaboration.

Clearly, if the definition and simulation of product and process is digital, then there's no reason we cannot adopt similar processes to those pioneered in software.

Agile methods, denoted by the idea of a journey, consisting of relatively small incremental, low risk steps taken by autonomous teams, toward a common goal, agile projects have been proven to be 1.5x more successful than traditional methods, with 2.5x better quality and 25% improved productivity (ref). It's not just about accelerating speed to market, or iteration cycles. It's also about improving results and quality.

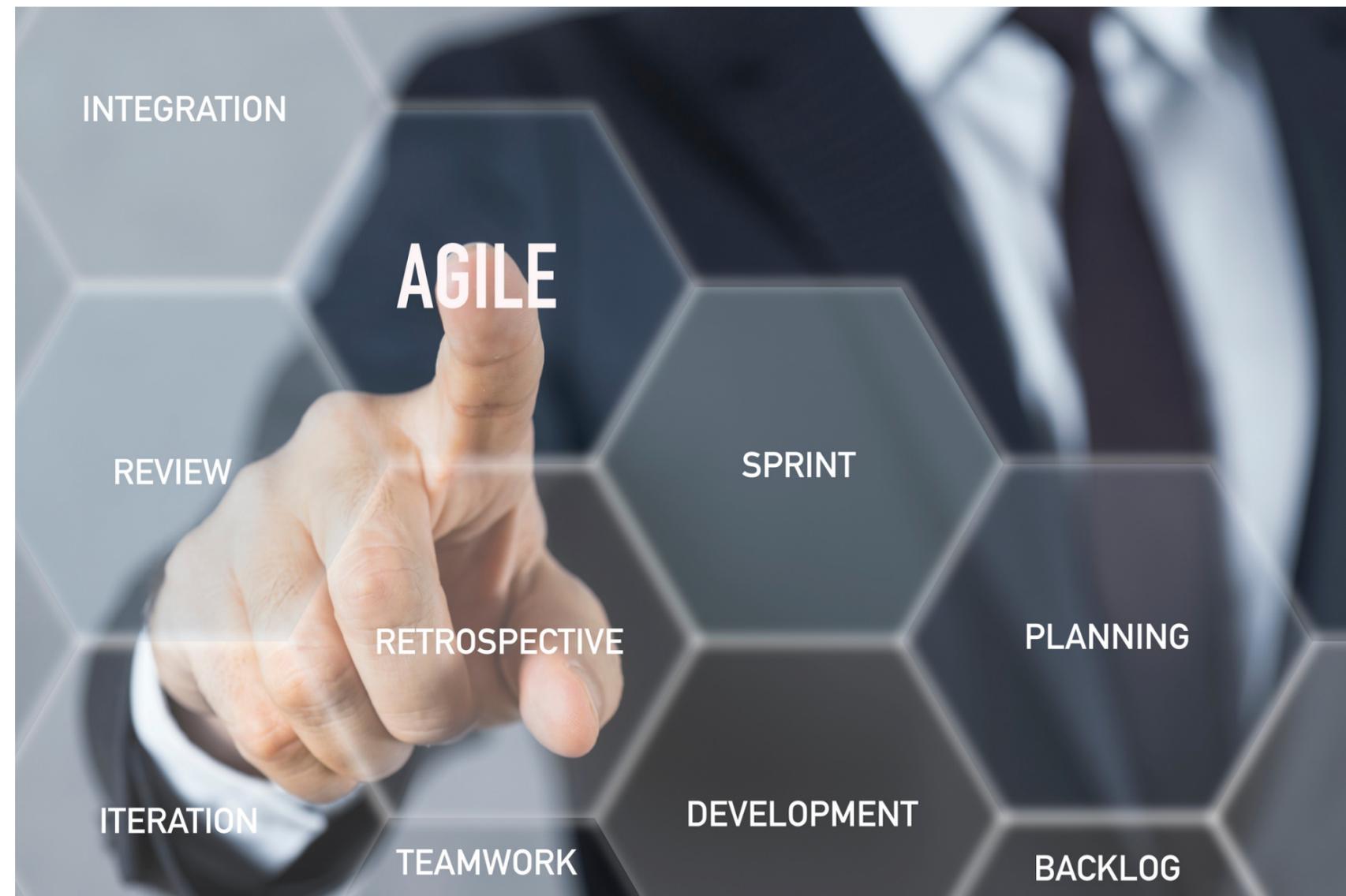
Agile focuses on relatively small autonomous teams, focussed on delivering discrete elements of value, or need. They need to work closely together and make informed decisions about the directions they take. However today's tools are optimised for isolated engineering and manufacturing workstreams, working in fairly traditional modes of operation, slowing cross disciplinary digital design & validation. According to research from PTC and Tech Clarity (ref) only 34% of engineers say "data is available to them, even within their own department" . Where suppliers or customer data was concerned it dropped to 8-9%.

“ Agile methodologies—which involve new values, principles, practices, and benefits and are a radical alternative to command-and-control-style management—are spreading across a broad range of industries and functions and even into the C-suite.

Despite much interest, it's clear that there's a relative lack of software solutions available today to support industrial engineering and manufacturing in their Agile endeavours.

When it comes to the implementation of agile processes across different engineering and manufacturing groups these issues raise some eyebrow raising questions in the 21st century... In increasingly fast moving design and manufacturing environments keeping pace with decisions is critical.

Where can we find best practices? Who is working on what? What does success look like? How do we tie our efforts together? How and where do we make decisions, together? How do we track our efforts? How do we make our efforts available to others, or is everything going to get stored in a shared hard drive, using a digital equivalent of paper based processes we thought we'd done away with by now?



BENEFITS FROM AGILE

Agile research & development processes have been proven to be 1.5x more successful than traditional methods, with 2.5x better quality and 25% improved productivity. However there's more benefits to be had beyond accelerating speed to market, or iteration cycles. It's also about improving results and quality.

When modelled, by Authentise, against existing CAPA (Corrective Action & Preventive Action) Quality improvement efforts tools like the one described here have resulted in a continuously connected digital thread of information. In a single case alone 10 focussed issues were digitally tracked alongside 12 key decisions against a backdrop of nearly 80 asynchronous contributions and 3 other enterprise systems. This resulted in 70% less meetings, however more tellingly it meant a complete digital thread was available to other teams.

54%
**BETTER ALIGNMENT
TO BUSINESS NEEDS**

[16th State of Agile Report](#)

44%

**DELIVERY
PREDICTABILITY**

52%

**ACCELERATE TIME
TO MARKET**

There are numerous other examples of cross functional collaboration in today's engineering and manufacturing organisations. "Sales Engineering", where customer needs have to be juggled across different internal organisations. "Sustainability" and "design for manufacturing (DFM)" initiatives requiring improved coordination to "design in" sustainability and manufacturability options during the design phase. Quality and field organisations' needs to ensure effective customer facing operations on the ground.

69%

**INCREASED
COLLABORATION**

31%

LOWER RISK





CHALLENGES

AGILE CONSIDERATIONS FOR INDUSTRIAL ENGINEERING

Just as software development processes had to adapt to accommodate the idea of agile development, so must industrial engineering and manufacturing. The notion of Agile development represents a marked departure from traditional modes of development. If we look at the changes that occurred in the software industry, the implications for change impact methods, processes, systems, architectures & culture.

The lean agile principles that have been employed for software are today very well documented, and perversely have their roots in the principles of lean manufacturing. The 5 accepted cores for lean, agile, methods:

Clearly, at the centre of the lean agile idea is the notion of an iterative journey, consisting of numerous low risk, relatively small, nimble steps, each of which is aligned to the needs of the customer.

In order to achieve these aims, typical software development methods have evolved to utilise an agile mix of discrete, configurable, systems based services architectures, consisting of individual microservices, which can easily be deployed to customers. Driven by nimble cross functional teams responsible for individual services it becomes possible to iterate toward the needs of the customer, as a whole, and at increasing speed as an organisation's ability improves.

To achieve an agile vision for industrial engineering, however, some new considerations are needed.



Identify value

Customer first... Centering customer expectations, needs, desires, and satisfaction.



Value Stream Mapping

Focus on the key steps to bring about value.



Create Flow

Define work with empowered cross functional teams aligned with customer value.



Establish A Pull System

Ensure customer value demand drives what's done. Ensure flexibility to evolve.



Seek Perfection!

A journey towards customer value. Increased iteration, speed & continuous improvement.

A DIGITALLY TRACEABLE JOURNEY TO VALUE

Traditionally industrial engineering projects have been governed by highly controlled, linear working methods, requiring different teams to complete a particular project phase before moving on. This is great when program outcomes are known and understood, and a concrete plan, where clear workflow structure is required. For areas where outcomes are less certain, or unknown, waterfall based processes often present a challenge.

Nowhere is this more true when trying to retain a focus on customer needs. Traditional waterfall methods require customer needs to be clearly understood and very well communicated up front, and to all participants across different groups. This leaves little room for the actuality of customer engagement, feedback and learning. The relatively gated and siloed nature of waterfall also makes iteration across different groups relatively slow.

Real world projects and products are more evolutionary, with teams often working in unknown territory, where breaking new ground requires collaborative input, often balancing conflicting constraints between customers and engineers.



“ Success is not about being the best. It’s about always getting better.

Tony Robbins

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In order to accommodate a more evolving idea of customer needs, a much more fluid form of project management is required. More iterative and more closely aligned to the needs of the customer, not the organisation.

The notion of lean is often associated with agile for good reason. In order to be agile, we’ve a need to iterate faster, more often and with relatively small, focussed, increments of customer insight & value. Smaller increments of innovation can be tested faster than larger ones. The cost, effort and risks associated with these smaller increments are less. Increasingly industrial engineering and manufacturing organisations are realising that with the advent of these new methods, it’s not a one size fits all. Ideally we’d be adopting appropriate methods according to need.

At a simple operational level retaining the planning and control elements of the traditional stage-gate development process while allowing for agile execution is clearly beneficial. This starts to separate “where we should go” from “what we need to do”. From an organisational perspective it’s also easy to see that some methods are more suited than others for different parts of the organisation. The needs of R&D, for example, are well suited for agile processes, whereas manufacturing activities with suppliers are perhaps more suited to waterfall.

However, in order for this to work, changes will be needed in the way teams are formed, the way information is made available, the decisions that are made, and the way we determine success/failure.

Finally, and critically, in today’s world where customer offerings, and the processes to make those offerings, can be represented digitally it increasingly means we’re able to accelerate the speed with which we can iterate. We no longer need to wait for any particular idea to be painstakingly and physically crafted. We can also iterate digitally. We can do this earlier, more often, more cheaply and in a more automated manner, than with physical representations.



FOCUS & ALIGNMENT CHALLENGE: WORKING TOGETHER

Traditional industrial engineering organisations face several challenges when it comes to retaining a focus on core customer needs, and the decision making that comes with it. Being able to outline all of pertinent requirements at the beginning of the project, when least is known about a project, can be tough order. In the meantime traditionally testing and customer feedback is left until the end of any particular step. As a result, if not anticipated well, customer input can lead to costly changes if the product does not meet expectations. The ability to go back to a phase once already completed can be expensive and time consuming.

Organised as they are, typically by activity, vs customer need, these more traditional methods tend to be focussed on the needs of an organisation, not the needs of the customer.

Therefore a different structure is often preferred whereby teams can more directly impact core customer needs. This demands cross functional teams who are able and empowered to identify and make the changes necessary to make a positive impact. Greater autonomy in this manner demands a greater availability of information, greater dependency and trust on team skills, and an increased tolerance for failure. that embodies a more iterative approach to meeting customer needs as learning develops. In this environment it could be argued that the currency of progress is one of learning vs action.

At a base level this all makes a simple kind of sense. However as offerings and organisational teams grow a more system based approach is needed, that allows individual teams to focus on, and iterate around discrete digital and physical elements of customer need, while enabling the wider system to succeed. In the digital software development world these elements are termed micro-services. In traditional engineering ideas of requirements management and systems engineering closely mirror some of these ideas.

Once tied together these individual teams then need to be allowed to iterate together as a whole, and at speed. Here the idea of lean, low risk, informed iteration takes shape. Simple ideas of quality management and continuous improvement, such as “plan, do, check, act” come to the fore, with individual teams able to point to their decisions, measure their progress and understand their impact.

This all presents the idea of an extremely fluid, more iterative, working environment, with a much higher fidelity of available information. Success therefore demands that all collaborators are able to understand where things are, to be able to move things forward effectively. Collaborators need to be able to communicate, address, monitor and review key events during their work threads. Questions, Issues, Insights, Decisions, Actions, Resolutions, Deliverables, Results and more, as they evolve, against the needs of the customer and the individual systems in which they were taken. These “events” are the core of the journey organisations have to take to meet their customer’s needs.

In the meantime if organisations are to scale the learning advantages gained from individual efforts the nature of these work thread events needs to be available to others with a clear line of sight to the context in which they were undertaken, and the rationale behind them. In this way others can choose whether and how to re-use these key pieces of information.

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The most successful organizations are those that have a clear sense of purpose and focus all their resources on achieving it.

Peter Drucker

COLLABORATIVE STRUCTURE: THE MEANS TO ACHIEVING AN END

Recent improvements in IT tools, systems and connectivity have provided enormous steps forward in fostering open collaboration enabling us to work together more directly than ever before. In addition to more traditional IT systems we now have a profusion of collaborative storage, documentation, whiteboards, chat, virtual meeting and more available to us.

However the downside of these systems has been that key information tends to be liberally splattered across these numerous, typically quite fragmented, systems. At best this obfuscation of information causes productivity losses as team members search for information across a variety of systems. At worst it retards further sharing across a wider organisation. This includes any automation that could be applied to that information.



Existing collaboration tools have also typically struggled when it comes to applying rigour and structure engineering and manufacturing teams require. While many agile development tools deal with the idea of “actions”, “issues” and “approvals” reasonably well, they fall short when it comes to bringing these together with other aspects of managing collaborative workflows. Softer ideas of “questions”, “insights”, “decisions”, “resolutions”, “deliverables” and the morphing of workthread efforts from one to another are also important concepts as teams work together.

However, this is not only true for individual collaborators, working on customer needs. This sort of idea is key for traceability and compliance purposes. Where customer needs impact safety, environmental, or other industry standards, increasing regulatory standards demand formal adherence and tracking. In most cases regulatory bodies and frameworks verify both the quality management of the manufacturer in question, as well as the specific design of the product, device or equipment against essential requirements stipulated in their governance frameworks. A solid background of traceability is therefore essential as supporting technical documentation must enable the assessment of conformity within the requirements of any specific directive.

INFORMED, MEASURABLE, CLOSED LOOP, RE-USABLE SUCCESS

Many organisations are familiar with the idea of a hierarchy of metrics. A simple way of organising metrics in order of importance. Traditionally these ideas are often outlined as a simple pyramid, arranged to the needs of an organisation, usually compiled once a year and typically a subject of quarterly review.

“

Continuous improvement is better than delayed perfection.

Mark Twain

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The first implication is clear. As with most organisations, the metrics above refer to the success of the group or department. Rather than measures of activity, or work, we need to concern ourselves with the effect of our work upon customer needs. To truly succeed we need to be more aligned to the needs of the customer, and the individual system element any particular team is responsible for.

In this agile journey to provide what customers want, hypotheses of customer needs will need to be regularly developed, tested and proven. This demands our agile teams are able to review the decisions they make, the actions they take and crucially, the impact they have on their elements of customer satisfaction.

This means goals and metrics aligned to customer validated ideas of quality, offering performance, customer satisfaction, utilisation and so on, vs measures of activity or productivity. Project success overall would therefore, ideally, be a mixture of more traditional project based notions, such as late/on time, as well as performance based metrics, such as performance and risk.

This leads to a second implication for metrics. In the world of often conflicting requirements it's perhaps more useful to consider a lattice based, and/or systems based, approach to key decisions. This allows organisations to model out worst/best case scenarios in their decision making processes. One of the most attractive features of doing this is that the value of an effort can be tracked during development, by factoring in all that has been learned as any project develops. If doing this, the key elements to try to keep these models simple, transparent and easy to communicate across an organisation. Excessive complexity can easily creep in, retarding efforts.



Today these ideas are traditionally tracked separately, often by a dedicated member of a team. However if we're utilising digital tools to work together it should ideally be possible to be able to gain a live, real time, view of what our efforts are producing, almost as a natural by-product of collaboration itself.

A third implication is also clear. Traditional metrics of organisational success are not fault tolerant. In order for an organisation to gain the knowledge it needs, encouraging exploration and tolerating failure will be extremely important. A failure is a lesson learnt. As many innovators know, learning "How not to do something" is a valid measure of success as we attempt to figure out how we can help our customers. This "validated learning" is what will ultimately provide us with quantifiable data to show we're on the right track. Arguably it might be the key currency with which we measure success.

Given all of this, today's views of governance will also need to adjust. As indicated above, the metrics governing success themselves will need an adjustment. Since the agile idea is based on an iterative journey, we'll also need to measure success in terms of relative performance measures, as well as absolute, and be able to provide a much more "live" view of where we are in our journey.

“Great things in business are never done by one person.
They're done by a team of people.”
Steve Jobs

More practically this also has some implications for work threads, the work thread events within them, and the supporting documentation that informs them. For example how would a team track a question that demands action that could lead to an insight, which itself leads to a decision? Today, for the most part, teams rely on discretely composed documents in shared hard drives, expensive IT systems and/or well trained and motivated engineering personnel. Unfortunately, when we look into this more, it's not really the documents we should be concerned with. It's the information contained within them that matters. It is this information, insight and raw data engineers need to make decisions. A document is just a placeholder for a particular type of information. They are not the same thing. We need to split out the idea of a work thread "event" from the documentation accompanying it.

Splitting the idea of work thread events from documentation, allows detailed documents to be managed, in large part, the way they are managed today. What needs to be added is the idea of a work thread, with numerous work threads events, pointing to any documentation. Ideally a complete genealogy of the work thread and its events would be retained for future re-use and compliance.



COLLABORATING & LEARNING TOGETHER

As mentioned, working in cross functional teams, often temporarily, ideally we want to be able to test our hypothesis with customers as soon as possible, and as simply as possible, rather than relying on elaborate business plans, market research, elaborate execution theories and so on.

Culturally this will mean a huge shift for employees moving from traditional processes. Traditional ideas of "throw it over the wall" will need to give way to much more inclusive way of working governed by what the customer needs, vs what the organisation wants to do. In this renewed environment teams are under pressure to work more collaboratively together right from the initiation of any project and share their learnings and experience earlier and faster than with traditional notions of development. Learnings and experiences from different groups need to be shared across different teams to ensure that the wider team, as a whole, is moving in the right direction.

Given the cross functional nature of our teams this also means being able to apply individuals to numerous different teams according to need. In each case teams will need to mature through ideas of "forming, storming, norming and performing" at a vastly accelerated rate. Experience already shows us that, for employees used to traditional norms of working, the result of all of this will feel somewhat chaotic.

For work involving contractors and suppliers this will demand additional strain. The rapid pace of iteration and the lean nature of that innovation can make difficult relationships tougher. In principle it would be beneficial to include partners directly in any effort organisations are engaged in, as they would include any other employee. However traditionally this has been a challenge for many companies. The idea of agile will demand more openness, more access to data and more direct interaction than has traditionally occurred in most customer-supplier relationships. As a result the assignment and protection of IP rights, confidentiality, non-disclosure, copyright, invention disclosures, patent protection and more will demand greater attention, more aligned to co-development, than with simple customer-supplier agreements.

“ Success is not final. Failure is not fatal: It is the courage to continue that counts.

Winston Churchill

OVERCOMING ISOLATED SYSTEMS TO DELIVER

Today's ecosystem of tools for research, design and engineering consist of a vast array of individual tools and offerings. Mostly developed in niche arenas, focus on the needs of individual disciplinary personnel, and offering impressive insight and productivity, these tools vary in their operating methods, processes, data models, integration levels.

Even at a more holistic level, when we look at ideas of PLM, QMS, ERP and others we see silos of IT typically designed to help departments. Even with traditional notions of development, In order to bring about a cohesive connection across these silos to satisfy aspirations for "New Product Introduction", it requires extremely large IT budgets, specialised professionals, and dedicated personnel.

A simple example can be seen with traditional tools for software, electrical and mechanical design. Offering huge productivity improvements for the individual people and teams in each of these areas there's little/nothing to help coordinate efforts overall. At a simple level, in each of these areas there's extremely different driving organisational ideas governing how these tools work, and hindering integration. The result is that it becomes difficult/impossible to achieve high levels of iterative agility, even at the most basic of levels.

“ Isolation is the enemy of improvement.

Ryan Holiday

”

However a key idea adopted in agile development can help. The separation of "What we need" Vs "How we do it" provides us with some structure around which we can focus. If we are to make an impact on our existing systems capabilities it's perhaps here. There's already a multitude of systems to govern "How", with only a few focussed on "What".

This, coupled with ideas of requirements management basic systems alignment, suggests a more task based level of integration across numerous tools is needed. This is perhaps where the best chance of success lies in bringing these efforts more closely together.



SOLUTION ELEMENTS

At Authentise we're passionate about our vision for agile engineering and manufacturing. We founded Authentise with a simple belief: That agile, distributed manufacturing is inevitable and we have to make it happen.

We want to make it easier for people to work together on their engineering, manufacturing and support work threads. Our vision knits together industrial engineering organisations with engaging, structured, threaded collaboration, work management & decision making capabilities, critical for agile operations.



ACCESSIBLE WORK THREAD COLLABORATION - EASILY AND FLUIDLY WORKING TOGETHER

Agile teams typically consist of around 7-8 personnel who can directly affect a positive outcome on any discrete package of work. Their combination of efforts, or work threads, need to be permanently available to others, and include any specific information relevant to their work.

In today's digital world the notion of collaboration should revolve around whatever the team requires and ensure that information is readily available to those who need it, from a single place. This could be a combination of direct, live, communication collaboration, such as messaging, more traditional notions of document collaboration, as well as the collaborative sharing of key aspects around their work threads, such as insights, decisions, resolutions, actions and resources.

This implies pointers to the myriad of tools and information systems available to teams as opposed to explicit storage within the system itself. Collaboration and work could then be wrapped around these pointers retaining existing policies for IP protection, security and more.

From an IT perspective, any software offering to address these challenges easily needs to enable smaller, cross functional, agile teams to work together to work together on bite sized chunks of work, or work threads, on their terms, as they need. This needs to be applicable to individual organisations as well as organisations working together, as extended, or distributed value chains.

Overcoming agile challenges need not be a huge IT undertaking. Today's systems are geared towards the needs of larger, heterogeneous, organisations. If there's one thing learnt from the revolutions seen in software development, it's that the advent of new ideas and accompanying IT support systems actually lowered barriers to entry restricting access.

WORK THREAD LIFECYCLE EVENTS – QUESTIONS, RESOLUTIONS, INSIGHTS, ACTIONS, DECISIONS, APPROVALS & MORE

Wrapping around a core notion of collaboration it's clear teams need a way to apply engineering and manufacturing rigour and structure to what they're doing. Work threads need a lifecycle around which teams can digitally flag and track "Questions", "Issues", "Resolutions", "Decisions", "Actions", "Approvals" and more.

Associated with these elements additional information such as detailed descriptions, due dates and ownership, can be linked to collaboration. In this way teams can see and track what's being done, who's doing it, and the wider context in which it's being done. For example, not only would a team be able to see a decision, they'd also be able to see the wider contextual discussion in which that decision was made.



“
Coming together is a beginning, staying together is progress and working together is success.
”

Henry Ford

RE-USABLE WORK THREADS AND LIFECYCLE EVENTS - UNLOCKING KNOWLEDGE & EFFORT

Ultimately work thread lifecycle events should become the currency of our overall efforts and should be capable of being reused and re-applied in other work threads. For example it should be possible to re-use an "insight", and by extension the context in which that insight was made, across numerous work threads.

Over and above simply re-using these work thread lifecycle events it should be possible to more closely link them together. For example a "resource" being used in one work thread may be applicable to another. If the date around that resource availability changes it would affect both work threads.

Finally, it should also be possible to combine and sum work thread lifecycle events together. This is very true for wider initiatives that demand a number of work threads interact together to improve a larger scale impact.



MANAGED WORK THREADS & INITIATIVES - WORK EFFICIENTLY TO ACHIEVE GOALS

In the real world work is a combination of top down direction and bottom up initiatives. Re-using work thread lifecycle events across different work threads allows us to accommodate and manage both modes of operation.

Top down direction will demand work thread alignment, execution and connection. Work thread lifecycle events will need to be connected to other work threads. As such a change in a higher level directional effort would be able to drive numerous potential work threads. Similarly, it should be possible to summarise actual changes in lower level work threads to understand impact with higher level direction.

Bottom up work initiatives will also utilise some similar constructs. However, it should also be possible to identify those initiative work threads which have been successfully applied so they can be reused. This will demand goals and key metrics be applied to threads, and that threads can be searched and re-used.

WORK THREAD PROGRESSION, METRICS & IMPACT - SHARED, COLLABORATIVE, GOALS

The notion of agile is one of an iterative journey. Teams need to be able to identify, share and re-use winning work threads and their associated events. It's therefore going to be critical that their collaborative work threads are able to include goals as well as a live measure of a team's ability to meet these goals.

Whether project, product or process specific work threads will need to have associated metrics, KPI and risk factors, that enable teams to see how their work threads are progressing, what the effects of their efforts are, and to understand what worked and what didn't.

At a higher level, with alignment of common metrics it would then be possible to manage the combined efforts of a number of work threads together as part of wider initiatives.

LINKED SYSTEMS OF EXECUTION - POINTERS TO ALL THE KEY SOURCES OF TRUTH

Today teams already use a multitude of tools, systems and infrastructure. As a result the reality for most companies is that there is no single source of truth, but rather multiple sources of truth. What's more it's increasingly apparent that attempting to connect all information to all systems to create a single source of truth is an expensive undertaking, assuming it's a reasonable effort at all. For the purposes of what's proposed in this paper, for agile collaboration, teams only need to concern themselves with pointing to relevant information, wherever that information may sit.

Less like a traditional IT system and more like a federated store of data connections, this environment would provide a collaborative platform enabling different organisations to communicate, coordinate & plan, while retaining their own focussed operational environments, currently stored in separate systems. A 'federated' data platform means that every organisation will have their own environment which can connect and collaborate with other data platforms as a "federation" making it easier for engineering and manufacturing organisations to work together.

Providing a federated layer of collaboration over existing systems also provides a great deal of potential for AI/ML assisted insights. Today many organisations are/have turned to IT solutions such as data lakes to try to uncover potential areas of optimization. In themselves these data lakes do not provide much value alone. As a system of collaboration, however, the potential is there to use similar notions for AI/ML assisted insights.



CONCLUSIONS & RECOMENDATIONS

Taking a leaf from the idea of Agile, our industry needs to better embrace the idea of continuous improvement, to better enable engineering and manufacturing organisations to achieve their goals. We need our customers' needs at the forefront of what we do. We need to actively and continuously question what we do. We need to identify, enable and accelerate what works, and share the knowledge of what doesn't.

To achieve this vision, it's clear new tooling is required. It's our goal to provide it. Together with our partners like DETI, HVMC, NCC, and the MTC, Authentise is focussed on the creation of tooling that's going to drive the next generation of engineering & manufacturing.

Authentise provides agile capabilities that make it easy for industrial engineering and manufacturing teams to "work, like they all work for one company", to transform how their products are designed, engineered, manufactured, delivered and serviced... Find information. Ask questions. Raise issues. Get help & support. Drive actions & resolution. Share ideas. Communicate decisions. Highlight best practice. Optimise processes. Work together.

For more information about Authentise, and some of the solutions mentioned in this whitepaper, check out [authentise.com](https://www.authentise.com), our [LinkedIn](#) and [YouTube](#), or contact us at info@authentise.com.

ABOUT AUTHENTISE

Since starting at Singularity University in 2012, Authentise has focused on providing flexible, data-driven workflows in the most agile manufacturing and engineering settings. It has become a leader in process management tools for additive manufacturing, helping to manage the order to part process by connecting to machines and providing operators with digital tools to enable traceability, repeatability and efficiency on the shop floor. Clients such as Boeing, 3M, Danfoss and others have seen savings of up to 93% with 6x ROI in the first year.

Now we're launching Authentise Threads. A powerful workthread management & collaboration tool, Authentise Threads helps agile cross functional engineering teams "work together, like they all work for one company". By bringing teams together, enabling access to data and decision making tools they need, Authentise Threads helps speed up the rate of innovation and drive meaningful improvement in risk, uncertainty & quality.

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