



AGILE
PROJECT MANAGEMENT
AND DELIVERY



DSDM®
CONSORTIUM

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AGILE POSITIONING

THE AGILE SPORTS CAR

For some, implementing agile might be likened to getting a new sports car. It looks sleek, shiny and can go very fast, speeding past us on the motorways. In theory, it should get us from A to B faster, and we can have fun getting there. We also see very bad sports car drivers however, trying to overtake when it is unsafe, cutting in at the last minute, not taking care of other road users – basically ignoring the rules of the road.

In fact, the best sports car drivers know the power they have in their hands and the potential dangers that can ensue from driving badly. The same can be applied to agile. In fact, the agile movement was born out of a set of concepts (see appendix) that didn't come from thin air but developed over time from experience of working in other ways. Whilst it looks and feels quite different, to be successful it must fit into the organisation, obeying the rules of the road. It must incorporate the processes that have developed for good reasons over time, whilst changing those that add no value. Just as driving a sports car well requires skill and knowledge, successful agile implementations need skills, at all levels.

A sports car wouldn't be able to function well without a good road infrastructure that enables it to be driven fast, a support team to keep it in good condition, petrol stations to keep it resourced and good planning on the part of the driver based on where he/she is going and for what purpose. Getting to Exeter quickly, finding this is the wrong

destination, then turning around and travelling on to the true destination, Newcastle, wastes a lot of petrol and time in the process – whereas implementing a good navigation system in the first place would have saved a lot of time and cost, never mind loss of face in front of passengers and bystanders who now see the driver as incompetent (and he/she may have missed the meeting).

Equally with agile, it is important that an holistic approach is taken that will consider, amongst other things:

- Is the purpose of your journey understood and are the foundations in place to enable you to get there effectively?
- Have you got the right people who understand the methods and processes to be applied and who also have good knowledge of the direction in which you're heading?
- Are your interfaces and supporting processes geared up to enable the agile processes to run effectively?
- Does the whole organisation understand the approach and the part they play?





THE AGILE SPORTS CAR

THE AGILE ENGINE

THE AGILE PROJECT

AGILE PROJECT MANAGEMENT

THE AGILE ENGINE

Agile may be seen as a panacea – a cure for all the problems of software development. It has certainly revolutionised software delivery, delivering real value earlier, increasing quality and bringing development teams and their customers together. It could be likened to the well-honed engine of our sports car, producing high performance. When implemented well, it can greatly improve productivity and performance.

Where agile is implemented only into software delivery, however, there is a danger of creating a chasm, and worse, conflict, between the agile engine and the organisation, including other functions within IT. To really take root, the engine needs to work with the organisation, not against it, and needs to embrace well-proven processes where appropriate and change or remove those that add no value.

THE AGILE PROJECT – STEERING AND DRIVING THE ENGINE

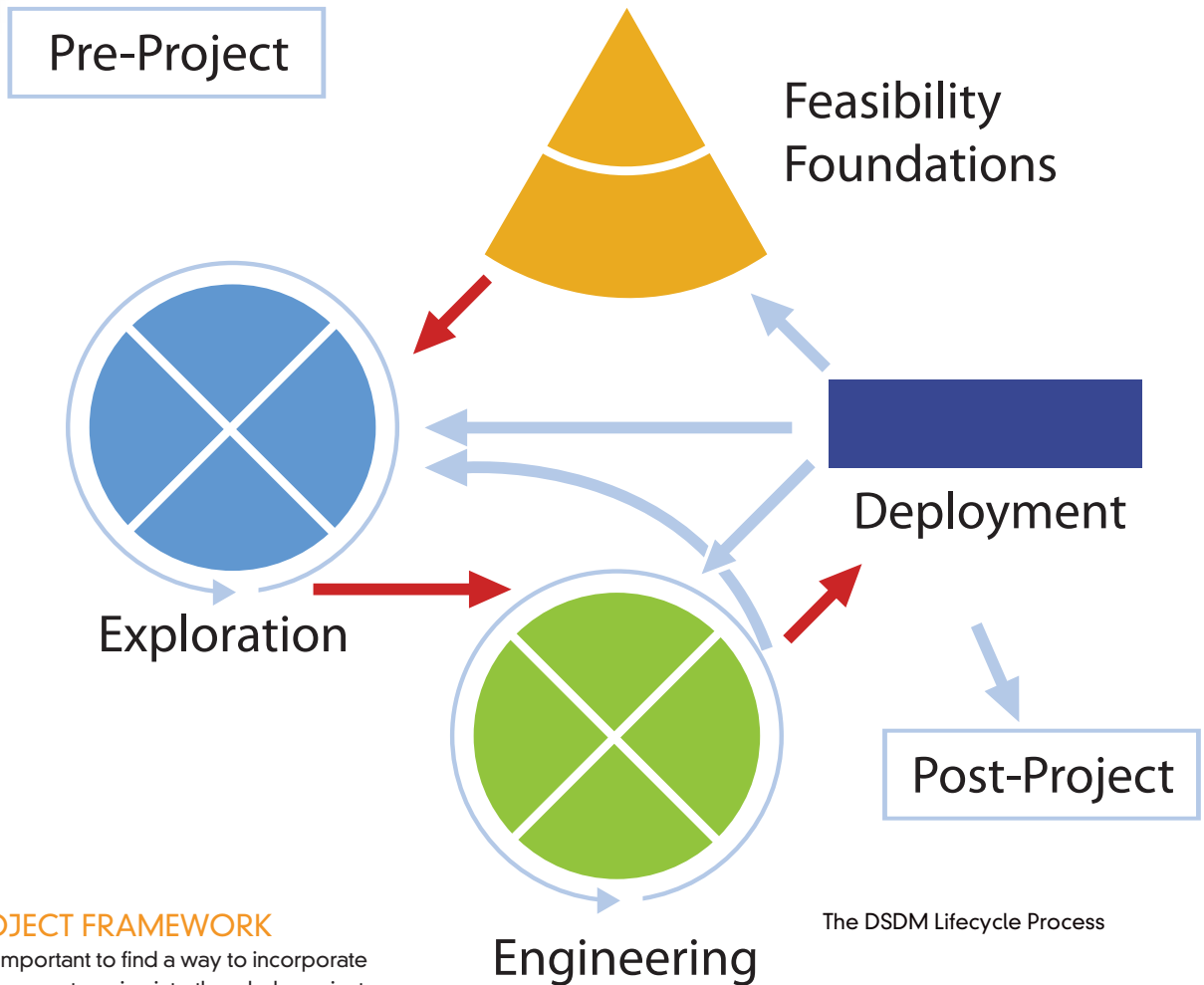
So, just as a successful journey in our sports car depends on good planning, a good understanding of where we are going and a good support infrastructure, it is equally important to build this into agile projects.

To have successful agile projects one must look at the whole life cycle, from inception through to delivery of the last feature and beyond to benefits realisation. The approach must consider the risks, the stakeholder management, the vision and why we are doing this work at all. It has to define waypoints along the path to determine progress and to reflect on whether it is the right direction.

AGILE PROJECT MANAGEMENT

All of this sounds like (and is) good project management. Some people say that agile projects do not need project management – this is a fallacy. The important thing is the way in which projects are managed and this is quite different. Traditional command and control project management, relying on tasks in a project plan, no longer works and using such approaches may well lead to project failure. It is important for agile projects to be managed by someone who facilitates the process and deals with the external influences so that the development teams can get on with their job.

DSDM and APMG have worked together to produce the agile project management qualification – AgilePM® – aimed particularly at traditional project managers, for example those who are PRINCE2 trained, to help them convert to the ways of working needed for AgilePM®, as well as provide guidance for those new to agile.



The DSDM Lifecycle Process

AGILE PROJECT FRAMEWORK

It is equally as important to find a way to incorporate the agile development engine into the whole project life cycle, from initial idea through to a successful project outcome, without unduly slowing things down or going into too much detail too early.

Know where you're heading

Having a framework that helps you do this is very useful. One of the few available is the DSDM Agile Project Framework. Any such framework should be flexible enough to accommodate the specifics of all agile development approaches, for instance development time boxes (DSDM), sprints (Scrum) and Iterations (XP). It should provide guidance and a standard approach in many areas, for instance:

- Understand the features early on. The high performance of the engine relies on the pre-existence of a sufficiently detailed features list (e.g. a product backlog or prioritised requirements list). Sufficiently is important – judge when you have information to move safely forward – too much detail and you waste time, confuse and slow things down; too little detail and you risk having to come back later or are missing key factors. Then determine what has to be delivered (often called the minimum usable subset (MUS) or the minimum viable product (MVP)) and what could be done if there is time;
- Create budget and time estimates to assess whether expected benefits outweigh the cost of delivery and also the relative priority against other initiatives;

- Plan the sprints or time boxes to ensure the right features are delivered at the right time, even if this may change as you get into detail;
- Have an early understanding of the architecture and design, even if they will evolve further in the process. Involve your infrastructure teams in these discussions throughout and then there will be no surprises during deployment;
- Determine a framework for deployment, tying into the organisation's infrastructure – its release capabilities and processes, thus ensuring benefits are realised as quickly as possible;
- Find ways to manage expectations and communicate progress to important stakeholders that are not involved day to day.

Satisfy your regulators

Since there is a standard approach with standard products, such a framework can be audited. DSDM, for instance, has been subjected to auditing scrutiny and has passed successfully. The definition of standard roles within the framework helps to ensure that nothing gets missed and nothing is done twice, but the basis is still the team, the engine and the realisation of the vision/goal.

Scalability

An holistic framework, such as DSDM, also easily enables scaling, something many people wrongly perceive as beyond the capabilities of agile. The organisational structure allows multiple teams, and the upfront foundations work provides the opportunity to partition the feature set appropriately to those teams. Roles such as the technical coordinator ensure coherence and consistency across the teams, whereas roles such as the visionary ensure the same across the vision/goal.

CULTURE

PEOPLE

We said earlier that it is equally important for the sports car driver to follow the rules of the road and the same applies to agile – we will explore this more when discussing governance.

It is, however, also important to recognise the different abilities and opportunities the sports car gives us and to change the infrastructure and rules to get the most out of the technology, whilst ensuring it is still safe to drive. For example, the idea of a man walking in front of a car with a flag was time wasting, used too many resources and unnecessarily slowed things down. Equally, however, especially as more drivers take to the road, it becomes important that they are adequately trained and accredited (tested) to show that they can indeed drive. The same applies to agile. The culture must change to remove the barriers and procedures that do not make sense, add no value or simply slow things down, and everyone involved must understand the philosophy and techniques and be able to collaborate with each other effectively. Then, adequately trained and skilled, people can be empowered to implement the inevitable improvements that will ensue.

There are now a series of accreditations offered that can help people in the organisation to become effective, safe

drivers. In addition, just as we have driving instructors, it is important to use the services of experienced agile coaches to help us get up to speed and to help us resolve or avoid more difficult problems into the future. Also, continuous process improvement techniques such as lean and Six Sigma can smooth out the bumps in the road and ensure our agile car has all it needs to perform well.

Of course, in large organisations, changing the culture is never going to be easy, it takes time and should be undertaken professionally, following a vision with stepwise increments. (Doesn't this actually sound the agile way to do it anyway?)

PROJECT MANAGEMENT OFFICE AND GOVERNANCE

One of the key areas in cultural shift is the role of the project management office (PMO) and governance in an agile environment. Deeply bureaucratic processes designed to ensure that time and money are either being used effectively (at best) or not being wasted (at worst) need to be examined, as the underlying message of agile is that we are doing what the customer needs and have the feedback loops directly from the customer to ensure this.





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POCKETBOOK
 Additional guidance for agile PMOs is available as a pocketbook, 'The Agile PMO', from the DSDM web shop at:
www.dsdm.org

AGILE PORTFOLIOS

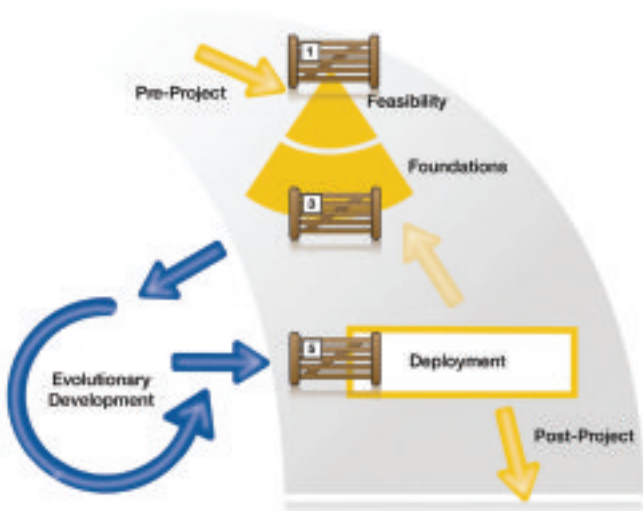
Nevertheless, we have to consider how we decide what work to undertake at all, how much money we are prepared to spend on it, how we will know it is successful, what are the interfaces to other initiatives, etc.

So bodies such as PMOs are not redundant for agile initiatives, but they do have to reconsider how they will operate. The diagram above shows the characteristics that are likely to lead to a more supportive PMO, and also those that probably don't help.

GOVERNANCE

We may have to review the way that gated processes are implemented. There are still points where they may make sense, for instance after the feasibility phase and after definition of the high level requirements, and possibly at the delivery of an increment. However, gates within the iterative development cycle where effectively work stops until everyone, perhaps including those not very involved in the project, decides that it can go ahead to the next stage, probably do not add value. They may have made some sense when millions or billions were at stake and where there was no incremental delivery, but need to be reconsidered given that value is being delivered more or less constantly and consequently the risks of project failure are reduced.

But just like when we are planning our journey to Newcastle (which we have to get to – it is part of our MUS), if we find it will be too expensive we may decide not to go at all. The early go/no go decisions are still important and an holistic approach to agile makes such decisions easier to make since sufficient upfront work has been done to assess the size of the MUS/MVP, allowing us to make the decision.



EVIDENCE

Of course, anyone can expound ideas and they may be right or wrong. The real proof is in evidence that approaches really work.

CASE STUDIES

The DSDM website has a number of different case studies describing the use of holistic approaches to agile. Some worth taking a look at are:

- ▶ **DSDM enables more than just agility**
The successful implementation of DSDM Atern at Infonic AG in Switzerland improved software delivery beyond expectations and actually had a beneficial impact in unexpected areas.
- ▶ **Improving outcomes through agile project management**
The Combat Identification Server (CIS) Technology Demonstrator Project (TDP) was delivered to time, quality and budget under a multi-party contractual arrangement. The objective was to help clear 'the fog of war' by providing a picture in the cockpit of an aircraft of the position of nearby friendly forces on the ground.
- ▶ **Highways Agency case study**
The Highways Agency generally mandated the use of PRINCE2 on major ICT projects, and it was a requirement for this project where DSDM was identified as the best placed agile method to integrate with PRINCE2, meet the needs of the team and quality criteria of the client.
- ▶ **Using an agile approach in a large, traditional organisation**
Can agile approaches be used successfully in large organisations, where traditional methods and high levels of governance are the norm? DSDM was incorporated into a development culture at the Online Computer Library Center (OCLC) that was deeply rooted in 'traditional' software development methods. Examples from multiple projects illustrate how the adoption of DSDM helped OCLC change its culture and achieve success in software development and deployment.

SUMMARY

So we have an exciting sports car with a well-honed engine and we have all the supporting tools to ensure the car is driven safely, to optimum performance and will arrive at the correct destination.

Happy motoring!

Steve Messenger
Chairman of the DSDM Consortium

APPENDIX

BACK TO BASICS – THE AGILE MANIFESTO

So what does agile actually mean? Let's go back to the Agile Manifesto and explore that a bit:

INDIVIDUALS AND INTERACTIONS OVER PROCESSES AND TOOLS

This should be read carefully. It is saying that the people and their interaction with each other is key and one shouldn't blindly follow processes or be slaves to tools. It is, however, not saying that processes and tools are not necessary, just that they need to be there to facilitate rather than to control.

WORKING SOFTWARE OVER COMPREHENSIVE DOCUMENTATION

This is saying that it is more important to produce something than to spend inordinate amounts of time producing paperwork and bureaucracy. It is not saying that documentation is not needed, just that it should be an appropriate amount.

CUSTOMER COLLABORATION OVER CONTRACT NEGOTIATION

This stresses the need for everyone involved in the initiative to have the same goal and vision, and hence work together to get there. Individual concerns come second to the 'greater good'. No one, however, would advocate not having good contracts and good high-level understanding of the vision and goal.

RESPONDING TO CHANGE OVER FOLLOWING A PLAN

This is saying don't be slave to a plan, but it isn't saying don't have one. In our sports car analogy we need to know that we are going to Newcastle, roughly when we want to be there and the route we might take to get there. We will react, however, to events that may change our course – roadblocks, bad weather, a call from a friend in Doncaster. Such changes are normal and we should embrace them as long as we see the impact on our original plan and can adapt successfully.

Leaner for longer

Minister of State for the Cabinet Office Francis Maude asserts why Continuous Improvement techniques are all the more valuable today when financial budgets are severely constrained...

There isn't an organisation in the world that doesn't need to change with the times; that doesn't need to continually improve to meet fresh challenges and seize new opportunities. To put it simply – we adapt to survive.

The civil service is no exception. Some months back I visited a large HMRC operation near Newcastle. The work that staff were doing there was neither highly paid nor glamorous, but was nonetheless important. They had committed to driving up their productivity and performance through the adoption of lean Continuous Improvement.

This is a very demanding methodology, and requires the complete commitment of staff to a rigorous daily collective self-evaluation and to constantly searching for ways to do things better and quicker.

These civil servants were succeeding. Day by day they were improving productivity and performance – not because managers had ordained it, but because their own commitment to public service motivated them to want to do things better. In this activity, well away from the public gaze, and a million miles from the 'Yes Minister' image, these civil servants were proud of what they were achieving, engaged and committed and determined to do it better and better. My point is that there's nothing about the British civil service that makes it impossible for things to be done really well, and there's much that is.

In these last two years alone dedicated civil servants have taken on huge challenges, tackling the huge

budget deficit this government inherited, helping to implement an ambitious programme to reform public services and decentralise power across the country. But as no-one is in any doubt, serious challenges remain and reform is going to have to go further and faster over these next few years.

This is true for all of us working in the public sector, with Britain still facing huge financial and economic challenges, as well as rapid social, technological and demographic changes.

And the demand for change doesn't just come from ministers – it comes from civil servants themselves, many of whom have told us their daily frustrations with a culture that can be overly bureaucratic, risk averse, hierarchical, and too focused on process not outcomes. This reflects the wider public sector picture.

After coming into office we set up a Spending Challenge asking for civil servants' ideas on how the government can do more for less. 60,000 public servants from across the country sent in their ideas for improving the way services are delivered. It was clear that it's often the people at the coalface who are most keen to embrace new ways of working.

In June 2012 I published a Civil Service Reform Plan that set out plans for a civil service that is pacier, more flexible, more innovative and more accountable; a civil service that is a smaller and more strategic operation, focused on the core activities for delivering quality and value for money public services.

This is going to require a real culture change – one that won't happen overnight, and can't simply be imposed from above. Instead we are looking for Continuous Improvement – an approach where everyone is focused on providing an excellent service to our public service users, and every single worker is empowered to improve what they do and how they do it.

Continuous Improvement

We all know that really being able to root out the waste depends on creating the right culture and environment. We know that by rooting out the bureaucracy there is suddenly time to focus on the service user's needs.

Continuous Improvement techniques such as lean, or Lean Six Sigma, or Business Process Reengineering, might not sound the most headline-grabbing. But they have the potential to make organisations work in a fundamentally different and better way.

Continuous Improvement means less: less waste, shorter cycle/delivery times, fewer stakeholders, less bureaucracy. And it also means more: more employee knowledge and empowerment, more organisational agility and capability, more productivity, more satisfied service users and employees, and more long-term sustainable success.

And Continuous Improvement techniques work.

LEGO Group is a great private sector example – in 2004 they were reporting losses of US\$326m. They changed their company goal to the customer-focused 'we make children happy' and started to use Continuous Improvement techniques, lean and Lean Six Sigma. As a result, in 2005 they reported a US\$134m profit increase and by 2011 their profit had increased to \$776m. And of course there are many great examples to be found in the public sector.

In Wiltshire, since adopting a lean-based Continuous Improvement programme, police now have 100% accuracy when grading incidents requiring immediate assistance, up from 80% since 2008. This means, they are now more effective at identifying and quicker at responding to emergency incidents.

The Highways Agency's lean approach has lowered overall costs and reduced delays to road users. In one case better scheduling of earthworks on the A46 Newark to Widmerpool scheme saved in excess of £2m. And HMRC have invested £54m in their lean-based PaceSetter Continuous Improvement programme, generating savings of £970m since 2005.

Every bit of evidence we have, from both the public and private sectors, shows that if we focus on the needs of our customers we also save money.

Continuous Improvement in government

Introducing and embedding Continuous Improvement principles is therefore a key priority for this government, as we aim to come out of this spending review period cheaper, yes – but also better, with services that are more catered towards individual needs.

I'm pleased to say every government department has committed to use Continuous Improvement techniques to improve their business performance and are setting out how they will do this in Continuous Improvement Strategies, Implementation Plans or as part of wider Transformation Programmes.

My team are working to support departments to achieve their goals, including by deploying our existing experts across government in priority areas.

For example, HMRC provided some resource that kick-started Continuous Improvement in DCMS, with the result that the department has improved its correspondence productivity by 40 percentage points, while the percentage of FOIs answered on time has risen by 15 percentage points, and the percentage of PQs returned by the given deadline has increased by 50 percentage points. These figures speak for themselves – and every department should be learning from this example.

It's imperative government departments don't work in silos on this – we should all be constantly sharing best practice – and that's true across the public sector.

Procurement

One key area where we are applying Continuous Improvement across the whole of government is procurement. Government, and indeed the whole public sector's procurement practises have long been notoriously slow, complex and costly. This incurred unnecessary costs for all involved – government, business and, of course, the taxpayer.

Since coming into office it has been my mission to make procurement much simpler, faster and more efficient. We have worked in partnership with Unipart – a recognised industry leader in lean – to develop a much simpler, streamlined process for how we should be sourcing our goods and services.

The new lean process replaces thousands of pages of guidance that compounded the problems of an overly bureaucratic process.

Since January, lean has been implemented across government with the ambition that all but the most complex procurement turnarounds are completed from announcement to award within 120 working days – a 40% reduction.

We know that it works – the early application of lean sourcing by the Government Procurement Service

(GPS) has meant the average procurement turnaround time has gone down from 220 working days to 127 working days: a 42% reduction. GPS are also forecasting a further fall to 115 working days as a result of Continuous Improvement.

I'm very clear that every department needs to adopt lean. There are some who are still clinging to the old ways of working – this is simply not good enough.

But these departments are going to find there are no hiding places if they don't improve. Through the GPS we have put in place new processes and systems that allow the collection of detailed monthly procurement information across all departments.

This information, including details on business with SMEs and supplier information, is reported to and reviewed by me in a way that no previous minister for the Cabinet Office was able or willing to do before.

In the past governments may have lacked good quality management information across the board, but this is changing. We have already introduced Quarterly Data Summaries to give a snapshot of how each department is performing.

And as outlined in the Civil Service Reform Plan we are going further by putting in place a robust cross-government Management Information system that will enable departments to be held to account by their boards, parliament, the public and the centre of government.

A common set of data to ensure departments are reporting on a consistent basis will enable comparisons of operational performance across government. This will drive improvement – and departments that aren't continually improving will find themselves exposed.

Empowerment

What all departments must grasp, and many of you will already know, is that companies and public bodies that have succeeded with Continuous Improvement have taken a 'hands-on' approach, from leaders to the front line.

They focus on encouraging and empowering staff to seek out, support and implement improvements to the way their department operates.

Some time ago I visited the National Insurance Contributions & Employers Office in Newcastle. This team has embraced Continuous Improvement from top to bottom.

Using lean-based tools such as Performance Hubs, Kaizen events, 5S, management of risk through 3Cs they have driven up their productivity and performance despite a financially challenging environment. Everyone in that team understands the Continuous Improvement way of working and everyone understands how they contribute to eliminating waste and adding value.

Continuous Improvement is about every individual worker. It calls for everyone within to adopt a certain mindset.

Conclusion

The way government operates is fundamentally changing. As you know we are opening up public services so there is more competition to provide the best, more flexibility and choice for users, and more local control over the way they are run.

No longer will you see a big state monopoly on services – instead charities, social enterprises, private companies and employee-owned cooperatives will all compete to offer people high-quality services.

For the first time in government we have opened up policymaking to a wide range of expertise through a Contestable Policy Fund worth up to £1m a year.

Using this award, I commissioned a review of how accountability systems work in other governments and multilateral organisations, and then made recommendations for how these approaches might be considered here.

Some still argue that, with the current financial and economic challenges, now is not the time to be rethinking how we work, for implementing new systems, but in fact the opposite is true. The challenges we face in government and across the public sector make efficiency and reform a necessity if we are to protect the frontline services people value.

This certainly applies to Continuous Improvement – which is important at any time, but all the more valuable today when financial budgets are severely constrained in government and across the public sector.

Today we can't shirk away from change. We can't duck reform. We must be brave, we must adapt, we must be continually improving to meet the challenges and seize the opportunities of a fast changing world.

Taken from a speech given at the Lean Government event on 20th September 2012



Rt Hon Francis Maude MP
Minister of State
Cabinet Office
www.cabinetoffice.gov.uk

DWP: Universal credit via Agile IT

The centrepiece of the Department for Work and Pensions' (DWP) radical reform of welfare is the introduction of the new Universal Credit, launched in April. Replacing income-based Jobseeker's Allowance, income-related Employment and Support Allowance, Income Support, Child Tax Credits, Working Tax Credits and Housing Benefit, the Universal Credit is a single payment to those looking for work or on a low income. However, the opposition's Work and Pensions Secretary Liam Byrne has described the consolidated benefit as "a flagship that is sinking fast".¹

Using one of Labour's scarce sessions in control of the parliamentary agenda, an 'opposition day debate', Byrne took ministers to task on the implementation of Universal Credit. A key theme of Labour's criticisms centred on weaknesses in the £2bn IT system to facilitate the transition. According to Byrne, a Commons investigation had found that there was "a real risk that the central government Universal Credit IT systems will not be ready on time", causing "widespread unease".

In the debate, even arch-Conservative Edward Leigh called on DWP ministers to scrutinise the IT arrangements for the Universal Credit.

"The problem with IT systems in the public sector, rather than the private sector, is the sheer scale of numbers – eight million households will use the new system – the complexity of the

issues and the lifestyle of the recipients," said Leigh. "I beg the Secretary of State to be cautious, to test and re-test, to pilot and re-pilot, and not to believe a word spoken to him by IT companies or his civil servants."

In response, Work and Pensions Secretary Iain Duncan Smith was defensive of the IT package behind the Universal Credit's roll-out. "I believe that we are taking the right approach; we have supported the scheme and our methods have received support elsewhere," said Duncan Smith.

"Our use of the 'agile' process has received good support from the independent Institute for Government, which in 'Fixing the flaws in government IT' stated: 'The switch from traditional techniques' – those used by the previous government and others – 'to a more agile approach is not a case of abandoning structure for chaos. Agile projects' – those used in the private sector – 'accept change and focus on the early delivery of a working solution.'

"I do not underestimate the scale of the undertaking. Some eight million households will be affected because they are in receipt, either wholly or in part, of some kind of support. I believe, however, that the department is capable of implementing programmes of this kind."

¹ www.publications.parliament.uk/pa/cm201213/cmhansrd/cm120911/debtext/120911-0001.htm#12091139000001



The DSDM Agile Project Framework from the DSDM Consortium

The DSDM Agile Project Framework is a robust, self-contained approach to Agile Project Management and solution delivery. Focusing on strategic goals and incremental delivery of real business benefits while keeping control of time, cost, risk and quality, it helps deliver results quickly and effectively.

Find out more at www.dsdm.org
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