

David Chassels – Written evidence (DSC0061)

A submission by David Chassels CA as individual with knowledge and experience gained over 40 years working with Small and Medium Enterprises (SMEs) and understanding how people work. This includes as executive with ICFC/3i, Partner in Accountancy firm BDO and recently responsible for nurturing of Research & Development (R&D) companies on how next generation enterprise software can significantly improve support of people including delivery of “digital services”

Focus of this submission is to help position what “digital” actually is as both a user and creator and what skills are required. This is based upon knowledge of the future of Enterprise Software based upon R&D of over 20 years. Many make all things “IT” very complex but in reality business is simple. “Digital” being about people and their process is also “simple” once knowledge of what it really is in context. The purpose of my evidence is to pass on many years of learning as I unravelled the complexity surrounding ICT to deliver simplicity in understanding how software can support people in the new digital world.

Background

1. “Digital by default” has been a much hyped often confusing term used by Government to try place emphasis on the need to become both more efficient and allow the citizen to be involved in “self help”. The initial emphasis has been on building information web pages to both try and simplify information and create one source of access for the public use. This has largely achieved objectives as a basic “digital requirement”. However building “digital services” is a whole different game as it is actually about “business operations”. This requires the real time back office connectivity to ensure all relevant information is available to allow decision making as users interact.

2. It is important to understand how the supporting software markets works and where it will be heading. First ICT has as the basic level 3 main aspects Infrastructure includes the use of internet, Hardware in use both supporting infrastructure and the users and the Software which delivers required functionality. The infrastructure and Hardware have evolved to the point they are commodities with delivery of new devices in a competitive price driven market. The other relevant aspect of how the software industry has evolved and how it behaves. The big vendors have consolidated and have huge investment in acquired “components” that are integrated under a marketing banner yet are complex to actually see delivery of a software solution. However software needs to reach that point where it becomes “commoditised” yet delivers required flexibility by removal of technical coding skills in the build.

3. Software is the key to both build and use of digital. It is a harsh reality that despite business logic never changing we still need programming languages that are quite alien to users. As a result the “interpretation gap” between what users want and the technical programmers is as wide as ever. This problem has been recognised for decades and remains the biggest barrier to delivery of people friendly functionality. This was at the core of 20 years R&D and it was “discovered” that for business requirements (and that include government) the future does not require coding skills with the emphasis switching to

understanding the required people process to deliver the required outcome direct from this knowledge.

4. The whole ecosystem of vendors and their associates has thrived at customer expense (Government in particular) with software complexity. Very few business people never mind politicians will dare challenge this abuse as there has been no real alternative. Any move to simplicity is not welcome. It is called the “innovator’s dilemma” and with domination by big US vendors the required step change has “challenges” but will come. It is this move which will change the future of “how” software delivers with the focus on digital support for users. That is what 20 years of R&D have addressed. A R&D paper was published last year for those interested the summary here <http://www.igi-global.com/chapter/object-model-development-engineering/78620> It is the start of what could be called a 6th Generation Language (6GL). The build of applications currently rely on coders using such as Java and .net as 3GL. 6GL has been a vision for decades but not delivered...until now.

5. The relevance of such a change is significant looking to the very issues being addressed by House of Lords Digital Committee. “Digital” is actually a simple concept indeed it is what IT for business and Government should have been about decades ago. However the emphasis has been on large processing and record keeping systems resulting in people having to fit into this “inside-out” approach where direct interactions have been poor at best. The Labour party recently sought views on digital by asking some good questions. The Appendix contains relevant information in my responses which should help understanding, in particular answer to Question 5 referring to “inside out” v “outside-in”. But be aware such knowledge is a moving target and this also applies to skills.

Digital skills for the future

6. With understand as articulated about software “capabilities” the emphasis on skills required changes. Build of digital services will be in the hands of those that understand not just what is required but how it needs to work step by step supporting users internal or external. The tools that deliver such capability remove the need technical programming skills. Nothing is static and change will be driven by users with direct input with new ideas way of delivering a better service. This research gives a view <http://www.techproresearch.com/downloads/the-future-of-it-jobs-critical-skills-and-obsolete-roles/> “However, it’s important to keep in mind that while business skills come in handy to establish relevance and prove one’s value, focusing on the right technologies is an even bigger part of the picture – it represents the foundation of the trade. Business skills are only useful when they are wedded to meaningful technology to capitalize upon them. Knowing which trends will take off, gain momentum and become common can future proof an IT career and ensure you stay on top of the game - and stay in demand.”

7. The coder / programmer. By removing need for mass coding of business applications these skills will sit at the very specialised level with focus on highly technical new ideas and products (business logic for “digital” is not in this category!). The term “geek” is often used but they are usually people of exceptional intelligence, often loners but have potential to build clever new capabilities. They are a small minority and have a passion which is self driven and they will find the route to acquire the skills.

8. The digital application builder. As indicated in the vision of how software will evolve and suggested by the Tech Pro Research is moving to business skills. A basic knowledge of database and spreadsheet type languages will be needed but these basic skills are being taught already but emphasis on having such basic skills can only be good. Those destined for programming hard coding world will be in the minority. In terms of “business” early indoctrination of the basics emphasising the importance of people being supported by “digital” information would be sensible. This can help and set knowledgeable expectations of what may lie ahead for individuals deciding their future. However fact is nothing beats business experience and interpersonal skills to start the creation of a digital service capability. It is important that the focus is to ensure easy use by “users” in effect the form adapts to that users specific needs and should of course support constant change.

9. The user. Much emphasis on this group has been made associated with “digital by default”. However this has different categories that need to be recognised.

- The current Government emphasis is on the “citizen” as a user and here the User Interface is a “public” form that needs good “design” yet also requires functionality that delivers required data/information and allows input of new information. All of this needs to be “intuitive” entry of new information only once and “friendly”. It must be assumed this user has had no training to use such a form.
- The “in-house” user and this in Government is the professional civil servant who often requires to interact with the public to deliver the service. They will also be the access point to help those unable to be a “public user”. Here “digital” functionality will rule and these users should be directly involved of creation of the digital solution. The user form should follow a logical format and is only part of the end to end process that will involve collaboration with colleagues across government and other agencies with all supporting back office functionality. This is where a well designed “digital” process can greatly improve efficiency and with real time feed back of who did what when, people can become “empowered” with change to the digital solution encouraged. The skill to build requires the “business knowledge of that operational need. It is not technology driven it will be a combination of experience and gaining the confidence of these users whose input is vital. Where there are complex needs unlike the “public user” in house training should be readily available.
- The “management” user needs to recognised where real time reports can be automatically created on both public and internal user activity. Views on activity that identify bottlenecks and problems that may need to be addressed. It should be noted that adopting modern digital software with all required supporting capabilities with that real time feed back will empower people at the frontline and reduce the need for a “heavy” layer of “management”. This booklet is worth of a read for those wishing to understand
http://www.transformationforum.org/PDFs/managing_transformation_means_transforming_management_sopk2.pdf The title alone makes it clear what the real challenge is!

Education on modern management skills linked with experienced business skills will help deliver truly transformational digital services. It is NOT about technology as long as knowledge of capabilities exists. Without good research to establish the capabilities or with reliance only on “geeks” and the “user” form the optimisation of digital will not be achieved. So the final skill set lies with this knowledge of capability, the business understanding and

those that make strategic decisions. All should have basic knowledge and relative skills as described to deliver on digital requirements. It will be a continuous learning process from the basics at school level to the “boss” making the key strategic decisions to set up digital initiatives in the first instance.

Appendix to Submission to House of Lords Digital Committee

The call for evidence by Labour party Digital Government Review Team which ended on 30th May, asked Questions which have relevance for understanding

Q1. What are the characteristics of a good supplier market? Do we have one now?

A1. By nature “digital” is recognition of users, internal and external, who drive your “business operations” see recent commentary from Mckinsey http://www.mckinsey.com/insights/business_technology/reinventing_it_to_support_digitization basically IT needs to go business to address digital. Important to recognise all digital services will be custom builds and needs software that supports change. This is now being recognised as “adaptive” capability. The web interface is only one aspect you need the have the following attributes that will support delivery on users needs as far as digital software support is concerned

- Process engine – orchestrating as required to ensure all works to plan
- Rules engine - reflecting real world of complexity and compliance
- Calculation engine - automating system work
- State engine - real time feed back from any point
- Workflow / collaboration - everything connected in right order
- Audit trail, events, escalations - managed control and accountability
- Real time reporting - become predictive and support empowerment
- Roles and performers - people and machines identified
- Management hierarchy - see who does what and when reallocate work
- Orchestrating legacy - recognising valuable data in legacy
- User interface dynamically created dynamically populated with instance specific data - linking people, roles, task type and data via forms for specific instances recognising that user forms needs to be specific for that task in hand and with intelligent functionality should for engaging for users
- Process and task versioning control - recognising change is inevitable

A good technology vendor will have all such capability under one Platform and is recognised as a “BPM” approach using what is called an “outside-in” approach putting people first as noted in 5 below. Currently GDS have yet to grasp the business and supporting technology requirements other than the creation and design of information on a web page

Q2. Are current government frameworks and standards (such as G-Cloud, Contingent Labour One, etc) supporting the creation of the desired supplier market across all layers of government?

A2. NO You need to understand “GCloud” represents an “easy” way to cut down high up front payments in both infrastructure and the software delivering on the requirement. As such claimed savings need to be “scrutinised”? It can be a “lockin” that could prove

expensive over time – very similar to the PFI concept with projects on a smaller scale but collectively could be significant. Government need to differentiate salient and non salient requirement the latter could be handled effectively under a GCloud but not for the important salient ones delivering a public service Unless there is in built provision to acquire access to the supporting software not just the data. (this is now possible) then it could prove to be very expensive.

Q3. What impact will increased use of co-production (or people-powered services) have on the procurement process and supplier market?

A3. It should make it easier recognising the “BPM” approach as described subject to 5 below

Q4. What needs to change in the procurement process? What else needs to change in the wider relationship before and during contract delivery?

A4. Procurement process needs to be recognised as involving all as described here

- The process starts with early **policy making** where decision makers should have a broad understanding of capabilities that are available to aid good decisions.
- As ideas move to **implementation** such knowledge should allow for a rapid assimilation of the requirements, likely costs and skills to deliver.
- As the **procurement** process is involved so specifications can be drawn up with detailed business outcomes and capabilities, but in knowledge such capabilities exist.
- Responses to requirements should both simpler and produce **accurate estimates** of man days required and thus accurate budgeted cost

Very important all in this “chain” are “intelligent” in understanding capabilities as covered in 5 below.

Q5. Are government buyers of ICT services 'intelligent buyers'? Are they well-informed both of the needs that they are buying for and of supplier capabilities and historical performance? If not what needs to change?

A5. Government has yet to achieve “intelligent buyer” status which starts with the absolute fundamental of understanding capabilities. The government shut down it research in 2003 and since then have had no effective resources to seek out proven new emerging capabilities. The Recent ICT Futures under the leadership of the GDS CTO has failed for reasons yet to be established. In terms of “needs” Government had wrongly focused on what is an “inside out” approach i.e. designing around existing legacy systems. A logical, easier and less costly way is to adopt the user centric “outside – in” approach. See this debate on this subject <http://bpm.com/my-bpm/forums/is-inside-out-bpm-dead> . Benchmarking efficiency in both delivery on contracts and operational efficiency should be adopted to deal in facts not self interest “PR (internal and external!). Never underestimate the power of self preservation (see this interesting perspective <http://philosophyofmetrics.com/2014/05/23/the-corrupt-primordial-class/>)

Q6. Are government buyers supported in developing and communicating best practice standards? Or in understanding which best practice standards already exist? If not what needs to change?

A6. This is part of becoming the “intelligent buyer” and it is clear that has not happened resulting in out of date advice contained in the existing digital frameworks. As noted a centralised research unit is required to distribute knowledge on best VFM and capabilities expected.

Q7. Is G-Cloud working as a buyer-supplier market?

A7 It is very important to recognise what the “cloud” actually is. Very good debate here including my thoughts. <http://bpm.com/my-bpm/forums/how-important-is-the-cloud-to-bpm> Yes for “commodity” use but no for digital custom service and every department will be different! Cloud contracts could be very expensive looking at TCO over a longer period so need to have in built option to buy just like a lease purchase of any other asset.

Q8. Is there sufficient stability and clarity of requirements in the roadmaps for the current frameworks and standards?

A8. NO sadly the current approach has failed to understand all the requirements for “digital” and how they work together. Result is the Digital framework is quite deficient in giving good advice. There is too much emphasis on “open source” which does have its place as for “commodity use but build of services it could be very expensive. No research has been carried out on this very important aspect and needs to be addressed.

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