# Advantage Note 19

## Creating Digital Advantage “The Digital Agenda”


**by**

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**Advantage Note Series**

Note 1 Business Processes & KPI's for Scaling
Note 2 Entering New and Foreign Markets with Advantage
Note 3 Top 5 Critical Success Factors for Entrepreneurial Economies
Note 4 Beyond the Business Plan to Agile Entrepreneurship
Note 5 Top 5 tips for engaging Management Consultants
Note 6 Creating Change Management Advantage
Note 7 International Entrepreneurs forum conference notes 2013
Note 8 The value of IT Frameworks & Maturity Models
Note 9 Alignment of IT and the Business
Note 10 SMART$^2$ Objectives
Note 11 Report on Individual performance management effectiveness
Note 12 Signing NDA's some guidance
Note 13 CSF's and Pitfalls when implementing social collaboration platforms
Note 14 A Model for business scaling capability
Note 15 Good goals for 2014
Note 16 Embedded system Advantage
Note 17 Introduction to the Scaling Capability Index
Note 18 10 Tips for completing effective Market Studies

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# Advantage Note 19

## Creating Digital Advantage "The Digital Agenda"

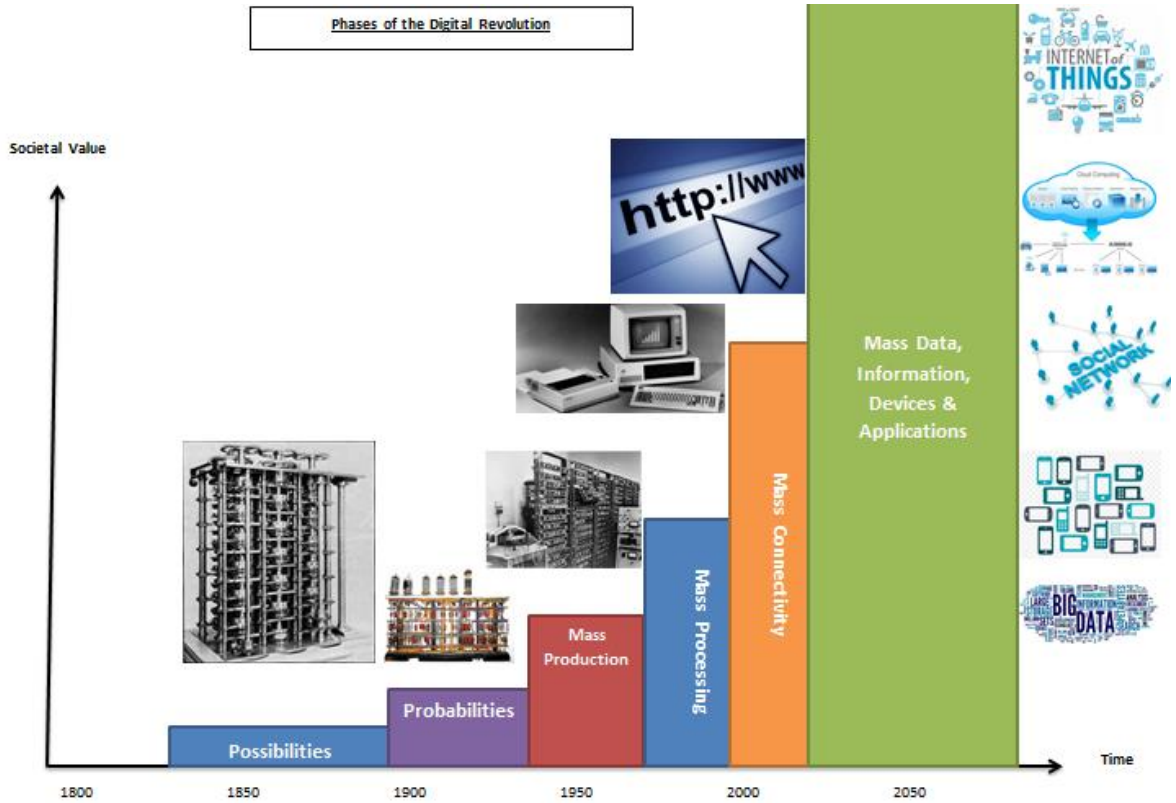
## Contents

## Creating Digital Advantage (The Digital Agenda)

### Introduction (The Digital Revolution)

Everyone is talking about the Digital Agenda; Governments, Business, Organisations, Consumers, and society in general, but "What is the Digital Agenda?" and "What does it mean for you and me in work and life?". This paper is intended to explain the Digital Agenda as it impacts us all but in particular for organisations whether public and/or private and how they can create "Advantage" by transforming or evolving into the new world where Digital is just " the way we do things".

Its important to remember that The Digital Agenda is action orientated at a point in time, it's about the plan to exploit. The Digital Revolution describes a period in history where there is fundamental change in the socio economic landscape; the Digital or Information Era might be considered similar. It started as far back as the 1830's with Babbage's concept of the modern computer, in the early 1900's we had the emergence of the vacuum tube triode which started to create momentum, but it was the transistor 'e emergence in the 1940's that caused the first step change in miniaturisation, speed and power consumption, followed in the 70's by the invention of microprocessors (millions of transistors on one piece of silicon), then the Internet in the 90's.



We talk about the Digital Agenda because the fast pace of new Digital technologies and their application are pervasive now. If it has not already done so for individuals, organisations and societies , it is about to cause fundamental change in how we live and work. Now is a good time to take stock of what "your Digital Agenda Is?"

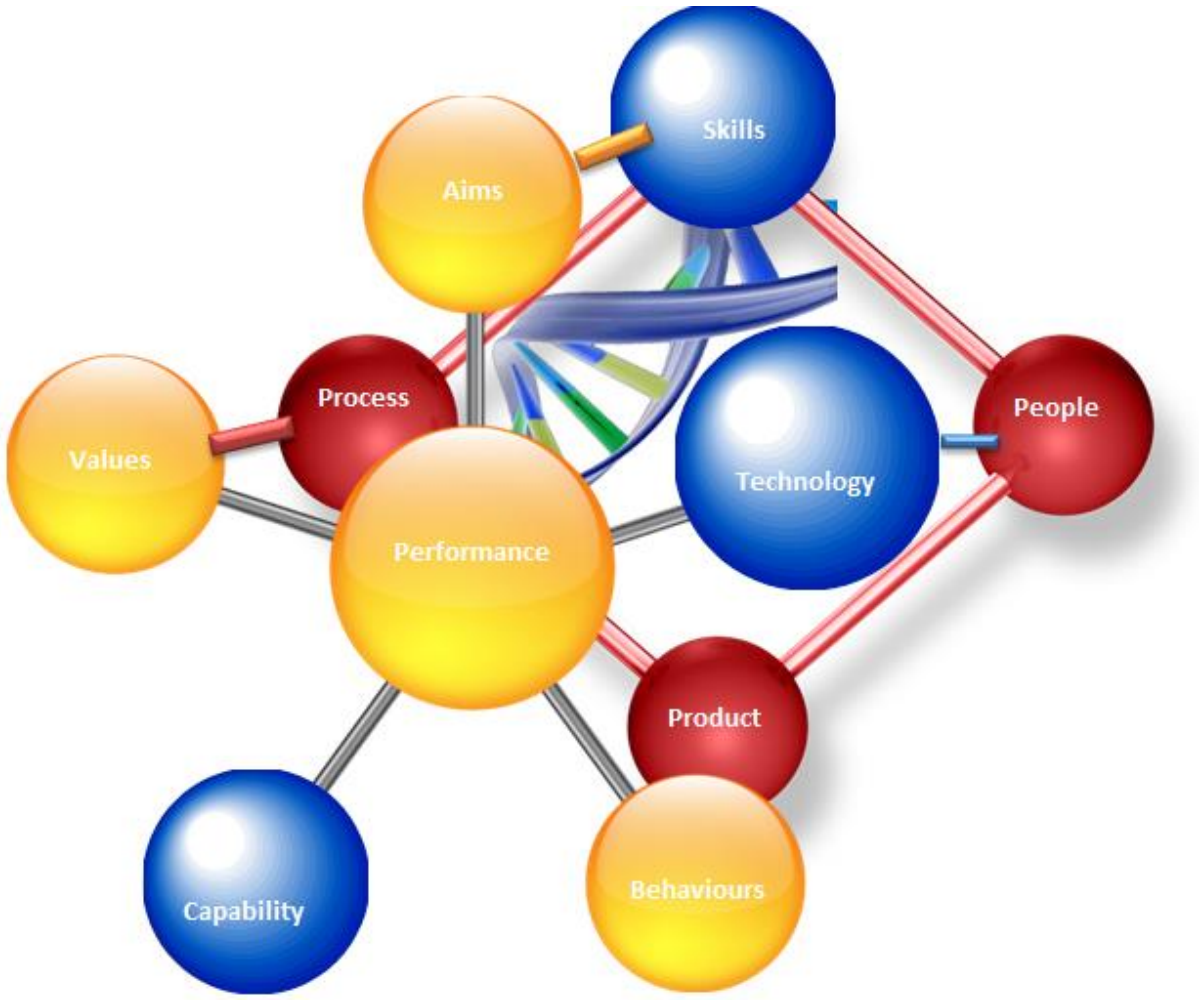
If you ask anyone "What is the Digital Agenda and How do I/We engage and leverage it?" you will get a range of answers such as:-

- Its about doing business on-line (eBusiness, eANYTHING)
- It's about Social media and social business (Facebook, Twitter, LinkedIn, uTube, Spotify & many others)
- It's about "The Internet of Things"
- It's about "Mobile devices and/or Apps"
- It's about reducing cost, improving performance and service using Information Technology
- It's about "The Cloud"
- Etc. etc.

These answers are not wrong, but are only pieces of the jig-saw. The Digital Agenda is bigger and more fundamental. Technology advances both major and minor will continue to occur day to day and year to year and though they are a fundamental component of The Digital Agenda they are not on their own a description of what The Digital Agenda is. Gartner call it "Digital Disruption" or "The Digital Dragon" in their CIO report for 2014. They explain it as the "Third era of enterprise IT" "The Digital era" where the first era was "IT Craftsmanship" and the second was "IT-Industrialisation". This is of course the IT professional's view of the world but if we go up a level or two It's a more fundamental change in how we live, work and play enabled by technology and we will fall behind or even fall over if we view this change/transition the way we approach other changes in technology and their impact.

This is a change that touches everyone , for most directly but usually for some only indirectly. It's like "The industrial Revolution" and to a lesser degree "The emergence of the Internet" which was one major technology evolution that changed behaviours and practices pervasively with impacts at every level in society (The emergence of the internet could be described as a significant phase of the Digital Revolution, which we could argue started with Babbage in the 1830's creating the bridge between the Industrial Revolution and the Digital Revolution). I use the industrial revolution analogy as it has more resonance with the magnitude of change and the possible risks and benefits of this current change it also demonstrates the socio-economic and cultural impact of such a large transition enabled by technology advances (Machines, water power, bio-fuels, iron making, etc.). It impacted everyone over the period of the change 1740 to 1830 nearly 100 years. Eventually we saw sustained growth, improved living conditions, improved life expectancy during the period. This was the period of the emergence of Capitalism also. How people lived, worked and played changed forever, society and the environment changed forever.

In this paper we will consider how the key attributes of the Digital ecosystem interact and are changing. The DNA is mutating and we need to ensure no rogue genes enter the system.




## Science & Technology Innovations

We could argue that the Digital Revolution started with Babbage in the 1830's and progressed to the analogue computer, but perhaps more accurately in the 1930's the Digital Principal/Modern computing was set out by the scientist Alan Turing. In the 30's & 40's we saw the emergence of early versions of Digital computers and computing.

The Digital Revolution as with the Industrial Revolution spans many years and both have various phases of development and interventions with radical new innovations which accelerated the pace of socio-economic change.

The current change underway in society labelled "The Digital Agenda" is a significant phase in the Digital Revolution where the level of innovation in technology and its application has reached a point where it is becoming pervasive and "is just the way we do things now". It's also a period where over the recent period since the mid 80's the pace, cost and volume of technical innovation has started to outstrip our abilities to select and adopt the relevant components at any point in time. Society,

Governments and Analysts have identified and labelled this new period starting in the late noughties as the phase of the Digital Revolution where technology should or is pervasive and in the near future we as a society will pass the tipping point where we will see the significant socio economic impact, and move to "It just the way we do it, rather than something new and revolutionary". Everyone will be impacted and we need to create ways for everyone to participate.

Individuals, Organisations and Societies need to have a "Digital Agenda" to assure their participation and create "Advantage for themselves " and fundamentally that is what "The Digital Agenda" Is about.

The Digital "Agenda" as it states is about having a set of goals and a plan to engage and leverage on an ongoing basis current and future technology innovations which are digitally enabled to create "Advantage". To put a plan in place of course a number of questions need to be answered. (The top 20 questions for the Digital Agenda)

- What is happening around us?
- What is our current situation ?
- What is possible & what is possible for us?
- Who can be involved? (can extend and assure our ambitions?)
- What are the pre-reqs (Are there some fundamental things we need to do before we can consider a new vision)?
- What are our options?
- What is our vision? (& who can help?)
- How will we know if new options become available or something changes?
- How will we pro-act and/or react?
- What are our strategies?
- What are our core values?
- What is our mission/aim?
- What needs to change now and in the future to be successful?
- What are our Goals, Objectives & KPI's?
- What information will be needed to achieve our aims?
- What are the critical success factors?
- What are the risks, contingencies and dependencies?
- How will everyone know how we are doing? What has been done? What is to be done? What can be done? What's now possible?
- How will we organise to continually leverage advantage, to exceed expectations, to be innovative, effective, efficient and outperform?
- How will we release innovation, agility, talent?

Note these are all about the organisation, business, societal group, though technology and digital are not mentioned in the list, they are implicit and need to be considered in the context of every question.

There are many processes, tools, methods, and best practices to assist organisations deal with all of the above including the technology aspects, however in the period of transition some of these will change, we do not want "To throw out the baby with the bathwater" so looking at the differences is

a useful approach . Our terms of reference need to include “What do the Digital leaders look like and do?”, “What do the academics and research organisations project?” , “What does societal groupings expect”.

I was at a Fujitsu world tour conference recently and one of the keynote speakers said “The hard stuff is the soft stuff” and I do not disagree, it’s the fundamental enabler for change and for creating advantage in the digital organisation. That said it does not mean the tangible and technical stuff is easy. The Soft stuff is the social, cultural, behavioural, interpersonal and inter organisational stuff. We will look at this later but let us take a look at those technically enabled changes that are fast changing the way we work and live.

*Core Sciences*

Chemistry, Physics, Biology and materials science have made major advances in our understanding of how the world works and how we can change the fundamental dynamics of solids, liquids and gases and manipulate them to create Innovative new building blocks. In fact the digital revolution has enabled this through computer systems that allow scientists to model, test, and analyse core scientific components. This has led to great advances in gene and bio technology, materials and nano science to name a few which contribute to advances in application technology and component development.

*Sensors & Transducers*

A **sensor** is a converter that measures a physical quantity and converts it into a signal which can be read by an observer or by an (today mostly electronic) instrument. The evolution of sensor technology and scientific findings that correlate any specific measured physical activity with intangible activity (For example electro-magnetic readings can indicate a person’s state of feelings in the brain). We have seen great advances in the nature, performance and size reduction in sensor technology coupled with the reduction in size but enhanced functionality of associated micro circuits. Sensors provide data and information for control and monitoring and decision making manual or automated. A **transducer** is a device that converts a signal in one form of energy to another form of energy, a sensor is a transducer, the same radical developments for sensors apply to other transducers such as stimulators. Take a heart pace maker they are now tiny embedded devices in the human body that can also wirelessly connect to the external world. Sensors monitor the hearts electrical activity and compare it with what it should be in the embedded processor and then decide what stimulation is required in the form of electric shocks to the heart to correct any heart rhythm problems. Think of invisible sensors in virtually everything e.g. clothes, the body, machines, streets etc. that can provide information to stimulate action or change automatically or manually. More information, more decision automation, more automated action, better decisions, quicker action.

*Devices*

A **device** is a constructed tool of any type in any of the core sciences and across the sciences, sensors above are devices, many sensors combine chemical processes with physical or electrical property changes that can be measured to indicate the target measurement dynamic and magnitude. Devices can be in effect anything that can be manufactured and used in daily life , work or society. Devices

are getting smaller , more powerful, easy to deploy and use and can connect to their external environment. A Car is a device, A Tablet computer, a washing machine, toys, games you name it. there are sub devices in devices such as embedded micro systems, motors, sensors transducers etc. The Smartphone is a good example phone, computer, camera, GPS, accelerometer, etc. Or SOC (Systems on chip), hugely powerful microprocessors and/or micro circuits that represent the full functionality of a specific device.

*Connectivity*

Connectivity between devices and systems has vastly changed in recent years underpinned by major infrastructure development and progress, research and development of new technologies and standards for communication and equally as important bandwidth. Virtually any physical device or object can be connected with any other object anywhere with technology that is available today. Bandwidth is important so that these connections enabled by fixed and wireless networks can happen at unrestricted speeds, in effect light speed with fibre optic networks. More devices, more connectivity, more data and information means bigger pipes are required and or are in place. Think of all the current ways we connect copper, fibre, microwave, wifi, Bluetooth, infrared and many more these are essential components of the Digital Agenda. Without connectivity we would not have the internet, we would not have the cloud, we would not have Facebook, twitter etc.

*Software*

Without software innovation we would not have this rapid and radical transition to where digital is pervasive in all out daily and work lives. Software in a sense is the bridge or the glue that brings everything together that ensures humans, organisations and society get the best out of technological advances. It allows the connections between individuals and machines in all mixes to be effective, it allows the right data and information to be in the right place at the right time. Software innovation allows all the components to work together right from the data source whether it be a sensor, machine or human, being processed, packaged and analysed at each relevant stage in its journey through the architecture into the core functional application to be presented for action or to initiate action automatically. Without the software we would not have social networks, neural networks and AI, eLearning, eBusiness , Mobile Apps, smart meters etc.

*Data & Information*

Data is a set of values for qualitative or quantitative variables. Information is about the message content. Good information is usually underpinned by a combination of quantitative and qualitative data. Information determines action or inaction whether based on human or machine judgement. In this new digital age the sources, volume and variety of information potentially available including proprietary and public/open data is vast and it raises many questions relating to the new Digital Agenda.

- What data is available?
- What do we need?
- Where and how do we get it?
- Which data is relevant?
- Is there relationships between different pieces of data?

- How do we collect, store, process and present data?
- What information can be extracted from the data?
- What information do we require?
- What information is interesting
- How do we analyse the data?
- What do we do with the data?
- What do we do with the information
- How do we protect the data? & information?
- How will we know if there is unauthorised access or use of the data/Information?
- What actions do we take.

As we can there are many questions that our digital agenda must address so we have the best available information as early as possible to take action to create Digital Advantage.

**The Digital Technology Agenda**

All of the above have to be considered by individuals, organisations, government and society in the context of their context, aims, visions and values. From an organisational perspective we are concerned with the business and aims of that organisation and what that means for our digital agenda where we can seamlessly leverage/integrate technology into changing , improving and creating advantage in line with the potential opened up and the vision for the organisation and its business. We know that radical transformations enabled by technology lead to radical transformations in how we live and work at each level above from Individual to Society in general. It's necessary to discuss some of the "Hot Technology Topics" of today as it starts to bridge our understanding of the fundamental changes in behaviours in how we live and work , that said these are just todays topics and tomorrow we can be sure there will be something new that can change our digital agenda potentially. So already we know our Digital world whether private, business or society needs to have the capability to survive and thrive as we go forward. As we consider each of these topics we will not give an exhaustive description of what they are as there is much written and published on these topics, what we will try to do is understand the impacts and who the digital leaders might be if possible to describe.

*Social Media & Platforms*

I start with Social because it brings out the fundamental changes that technology has enabled. There is of course huge research around social science and social networks dating back over 100 years, humans are social beings which we inherently understand. Access devices along with the connectivity infrastructure, layered with Internet related software have enabled the development of social based platforms such as Facebook and LinkedIn to gain mass adoption. In effect anyone can find anyone else, or anything else, connect, communicate, inspire action individually or in groups in seconds. Previous to the digital revolution it took weeks, months, years, generations often to find, connect, share and inspire action and change. With rapid and radical change such as social media there is an equal and often radical level of obsolescence not just technology, but processes, relationships and groups. If not total obsolescence then Radical change. Think back to the early 20$^{th}$ century and our main electronic communication system was a circuit switched analogue telephone system with some automation in built It enabled the social connections reducing the physical

location challenges. Think now today generally the traditional phone and phone number are not the first port of call for verbal communication. Text has become more dominant, multimedia rich a/v communications over the internet are the norm. Yet the replacement device has the same fundamental features in many instances “Smart Phone”. New participants are enabled into new and traditional groupings in society, whether its related to business or lifestyle. Think of crowd funding/sourcing where entrepreneurs or entrepreneurial organisation can involve global participants in idea creation, product innovation , funding, adoption as examples where virtually anyone can contribute and engage. Social platforms have enabled organisations to change how they work and interact with internal and external stakeholders, releasing talent, innovation and improving productivity and quality. Successful organisation who have leverage digital collaboration and social platforms have recognised and adopted digital solutions as key organisation change and development programmes rather than technology type change programs.

*The Cloud*

The cloud is like the data centre in the early days of the digital revolution where to leverage and protect technology, skills and data/information it made business sense to have large centralised computers and computing power centralised in a single location for an entity. Data, Information and applications were made available through relatively unsophisticated terminal devices connected through dedicated or shared copper pipes provided by telecommunication operators or proprietary contracts. The computing universe were the members of the entity and their central computing power. The cloud in effect has taken the technology developments relating to transducers, devices, connectivity and software to open that universe to individuals and entities where access devices can be highly powerful in their own right and can access local or remote computing power and data anywhere, anytime providing they are authorised to do so, and of course sometimes unauthorised. The cloud is all about the benefits of sharing creating multi use of IT Assets and the ability for the user to only invest, pay for and use exactly the computing power they require at any point in time. The barriers to use and exploitation of IT Assets including data has been significantly reduced. The choices for individuals and organisations have opened up. The Make, Buy, Rent, Borrow, Use options are now endless. We are moving towards “Everything as a Service” where we pay as we use/consume , and can provision, scale or descale in real-time. From a technology perspective we have “Infrastructure as a Service” where via the internet we can set up and operate our computing infrastructure needs regardless of whether we are an individual, organisation , small or large in a fraction of the time we could in the early days of the digital revolution. “Platform as a Service” in addition adds the components above the operating system and system management such as databases, applications, interfaces, tools that allow for rapid development and deployment of applications , and “Software as a Service” in effect allows us to rent everything and all we need to concentrate on is our business and our data and information leverage.

*Big Data*

Big Data is exactly what it says on the tin. As mentioned earlier with the radical evolution of technology, business and society there are vast quantities of data available to us, this data is of course continually changing and growing. Data on its own has limited value , however we often hear it referred to as “The New Oil” its fundamental to creating wealth, value and socio economic progress. However with this scenario , we still have to answer the 15 questions above around, how

do we create value from data, how does it change our value chains. Big Data as a term covers those processes, technologies and capabilities required to convert data into advantage for individuals, organisations and society. It covers capturing, cleansing, validating, indexing, storing, securing, analysing, accessing, combining, presenting , data as useful decision making information to inspire or cause action. We have a range of hardware , firmware and software technologies that are trying to keep pace with data growth and rate of change that provide value to us as humans, covering AI, Pattern recognition, Business Intelligence, neural networks and many others. It probably an area where the pace and volume of data outstrips the human and machine capacity to leverage the total asset available.

*Mobility*

A better word for the technology evolution and its impact is probably pervasive devices, whether they are fixed or mobile, whether they are a phone, tablet, or intelligent transducer the fact is extensive intelligence and information can be provided anywhere anytime to anything and these devices can access directly or indirectly vast amounts of computing power and data seamlessly. We think of smart phones, and tablets when we talk about mobile and for sure these devices have changed the way we live and work. Because it's not necessary to connect by wires or fibre optic cables the limitations of portable/mobile devices have been removed. Virtually all means of human transport are now connected to the internet and have significant computing power. An average family sedan car has over 60 digital processing units, has hundreds of sensors, has millions of lines of software code in embedded systems and produces vast quantities of data alone. We can do anything, anywhere, anytime as a result of developments in these technologies.

*The Internet of Things*

It's really an evolution of all that has gone before and all that has been said before in this paper. Because we can create extremely small intelligent devices customised to carry out their specific function or to adapt and configure what they do in any situation we can embed this technology in virtually anything if it has a useful outcome. Liquid, solid, gas, organic, tools, machines, toys, structures, you name it they can be connected to the Internet and through the Internet infrastructure provide some value creation function for individuals, organisations and/or society. Much is written about the Internet of things. IBM's strategy is about providing technology solutions titled "SMART SOMETHING", e.g. "SMART CITIES" where all the relevant components of connecting things including humans can cause socio-economic value for citizens and visitors in a city.

**Rate of change**

During the Industrial revolution management science had the time to research, understand and guide individuals, organisations and society as to best practices, and how to manage and leverage technology enabled change. Good models and practices have evolved over the years and many still have relevance in the Digital Transformation. However the pace of change in technology and enablement of new possibilities mean that best practices are changing in fact the fundamental nature of how we live and work are changing. So we need to look at how we manage change. In fact there is a fundamental shift in the capabilities and process required leading to fundamental cultural

change. The idea of managing change tends to suggest largely a responsive sequential approach which traditional best practice recommends adapted with techniques from the "Agile" world where we break this down into more agile sprints . The move to agile has allowed us to deal more effectively with the volume and pace of change while engaging stakeholders on a more dynamic basis. However we have reached a point when we consider the overall environment where we need to take a more fundamental and radical view of the transformation perhaps moving towards a more organic model that assumes change is pervasive in everything we are involved with. This in fact may help us take a different perspective where we look more to the Digital Natives (Under 30s) rather than the veteran experienced leaders for the solutions to organising our culture to live in this new world.

**Individual, Group & Social Impact**

*"The Hard Stuff is the Soft stuff "*

"Fundamental change to how we work & live", this is what is happening in a world where there is "Total Digitization" a term used by the Centre for Information Research to describe the embedded and pervasive use of digital technology in our lives today and tomorrow. Earlier we discussed the technology innovations now let us look at the equally if not more important core human and group behaviours & capabilities that we observe and have arisen as a result of the Digital Revolution. Some keywords:

- Society & Social
- Collaboration
- Change & Agility
- Leadership & Management
- Innovation & Invention
- Competence, Skills & Capabilities
- Culture

*Society & Social*

We have discussed earlier some of the ways technology has influenced society and our social environment and actions. It has fundamentally changed the way people and groups interact, it has also fundamentally changed the nature of networks. When we look at networks the volume, shape, type and size has changed whether they are individual or group networks. No longer are networks underpinned by physical introductions or formal establishment of interest groups over lengthy timeframes. Networks can be set up with a few keystrokes, are not bounded by time, size or geography. Think of the Arab Spring as a technology enabled social network that quickly formed and took radical action that caused fundamental change in specific societies as an example. A significant percentage of the global population that has access to the Internet can engage in new social networks whether it's for business, political or personal lifestyle reasons. Of course there are issues and key considerations such as anonymity, facilitation and mediation of new social networks whether it be in business or other life scenarios. There are risks such as criminal and fraudulent activities, economic and social unrest, privacy and security, at an individual, group, organisation, geographic level etc. So when we consider the significant benefits such as speed, scale, quality, communications and many others we must also consider how to create changes in our environment,

what the desired outcomes and behaviours are and how we enable these, and equally what are the undesired outcomes and behaviours are and how we prevent them. So this is a significant soft dimension relating to the Digital Agenda because it directly relates to behavioural change and human nature at an individual level and a group level.

*Collaboration*

Collaboration is a subset of social and society , however we see this trait as having radical significance as we progress through the digital age as it is key to releasing talent, Innovation and creating Advantage for Individuals, Groups and Society. As with the points made in social above the traditional barriers relating to the nature of collaboration have been significantly reduced by technology, social business/collaboration platforms are an example. Communities, Groups, Networks of people and information can come together where a common interest or goal exists and they can create significant innovation, action and outcomes. Think of a how you get on-line support from some of your key product/service providers today. Think of how hard it is to actually have direct contact with a human member of the suppliers staff, but you can access a range of communities who in many cases are not part of the suppliers staff but other customers or interested parties who address your problem or answer your question. In a sense that supplier has extended its virtual stakeholder community to connect and assist each other rather than exclusively depending on the supplier. IBM, Cap Gemini are examples where they use technology for what they call an Innovation Jam process, whereby they can engage internal and external stakeholders globally in innovating and their innovation process. Knowledge based organisations have strengthened their innovation and productivity by leveraging platforms to allow members find other members, find information, connect and collaborate using platforms like SharePoint and social connections. But remember collaboration is a human behaviour and if individuals and groups do not have the inherent skills and motivations to collaborate , no amount of technology regardless of how innovative it is will release that talent through collaboration. So soft skills development, change and culture adaption is required inherently, especially for the Non digital native. In addition though the digital native will bring skills and competencies that will expect and influence changes in how we work and live, they may be coming with absent soft skills that they need to acquire because they grew up in the digital age. The learning will be two way from digital natives to the over 30's and vice versa.

*Change & Agility*

We are moving towards a scenario where change is not considered an event or series of events but is just the norm, rather than being mechanistic it is more organic in nature. Agile methods are moving us to the other end (organic) of the continuum where we engage more real-time with stakeholders and the environment as a way we live and work , how our processes and information function, and are used. These evolutions require new skills, attitudes, capabilities and behaviours at an individual, group and systems level. New tools will be required , but also we need to understand further the boundaries and negative consequences in how we adapt here so that at an individual and group level the stress/concern triggers are negated or prevented. We have to acknowledge there are some fundamental reactions that are embedded in our DNA such as Flight or Fight, or Denial, Resistance, Exploration, Acceptance & Commitment. We also have to take into consideration that certain things take time to plan , execute and deliver such as major infrastructural projects or

drug development and how does this embedded organic change culture sit within the scenarios of major lengthy projects that will lead to change.

*Leadership & Management*

In the digital age we still require management functions, processes and systems, all be it they adapt. Let us first look at leadership. **Leadership** has been described as "a process of social influence in which one person can enlist the aid and support of others in the accomplishment of a common task/goal or vision". To create digital advantage and a digital agenda requires a leader who perceives the potential, is willing to explore and take action and calculated risks and can inspire stakeholder to commit to and take action in creating the changes required. However in this changing and changed environment its possible and desirable for anyone or group in a system to take a leadership position , to innovate and inspire change and improvement because the technology and culture enable this potential. So we have to understand as the leaders and managers how do we ensure this talent and energy is directed towards the overall goals and vision and how do we ensure the potential of the non-leaders to be inspired, engaged and contribute in this new emerging environment. So this is a new and different scenario for stakeholders in a group, organisation and society . We want to release this positive power while ensuring we avoid chaos and maintain control, stability and compliance yet minimise barriers to the change. It's here we need Management and enhanced management skills. **Management** in business , organizations and society is the function that coordinates the efforts of people to accomplish goals and objectives using available resources efficiently and effectively. Management comprises planning, organizing, staffing, leading or directing, and controlling an organization or initiative to accomplish a goal. Resourcing encompasses the deployment and manipulation of human resources, financial resources, technological resources, and natural resources. Management is also an academic discipline, a social science whose object of study is the social organization. We will continue to leverage current known best management practices as appropriate, however management and leadership will require new skills and capabilities to thrive and leverage the total digital business scenario that caters for the hard changes such as technologies and the soft changes in the culture and behaviours of individuals and groups. For example what management processes, controls, metrics and support are required to assure organic innovation, leadership and groups forming and dissolving will be aligned with the overall vision for the entity and even just as important how will stakeholders be managed so they can contribute and influence the vision as the environment evolves and changes. How do we empower and release talent, while continuing to have good governance and risk management. Consider the span of organisation structures hierarchy (command and control) to Flat matrix and other hybrids, in a sense new technology allows people in the organisation, group or society to bypass the designed in management structure so our thinking and actions relating to structure, management and leadership roles in this new digital era must adapt to create maximum advantage.

*Innovation & Invention*

Even in this paper the use of the work Innovation is pervasive, and by that I do not just mean technical innovation but every type of innovation relating to life, work, and society. Innovation is central we want the hard Innovation our technology, science, materials, tools, processes, products, services etc. but equally if not more important we need the soft innovation around skills, relationships, behaviours, leadership, management, personal development and enrichment, culture , values etc. Because Innovation is so central to everything in the Digital Agenda a core value may be Innovation itself . **Innovation** is about finding a better way of doing something . Innovation can be viewed as the application of better solutions that meet new requirements. It is generally considered a *process* that brings together various novel ideas in a way that they have an impact on individuals, groups and society. **Innovation is about use/application.** To leverage the Digital Agenda we need to understand the current innovation capability that exists and the gap and steps towards being best practice in Innovation. Invention is also important, in that it drives socio economic health for individuals, groups and societies. An **invention** is a unique or novel device, method, composition or process. Invention is more about the idea and the core creation. Invention often extends the boundaries of human knowledge, experience and capability. In this digital age digital invention and innovation are releasing talent and innovation across every aspect of our work and life, in a sense we have a circular action.

*Skills, Competencies & Capabilities*

Three terms that are often substituted for each other. I like to ensure we consider them as separate terms with specific meanings.

A **skill** is the learned ability to carry out a task with pre-determined results often within a given amount of time, energy, or both. In other words the abilities that one possesses. Skills can often be divided into domain-general and domain-specific skills. For example, in the domain of work, some general skills would include time management, teamwork and leadership, self-motivation and others, whereas domain-specific skills would be useful only for a certain job such as accounting, software development, traffic management, construction etc.

A **Competence** is an individual or group of skills, experiences, tools and track record of results that demonstrate that in certain contexts the right individual and/or group can set and achieve specific target outcomes. It is about demonstrated ability in the real works rather than tested ability in the class.

A **Capability** is about having the competence, processes, and capacity to achieve Vision, Goals, and performance standards at a target capacity, rate, volume and time frame as examples.

In setting a Digital Agenda for an individual, group or society all three need to be assessed as regards current status and the gap analysis completed so that the new capabilities can be acquired to become a best in class total digital business and create and secure Digital Advantage.

So what does this mean, well it means as we look at individuals, groups, organisations and society we have new skills, competencies and capabilities that need to be added to the two major categories when we look at organisations. When we look at a job or role we refer to the job/domain specific

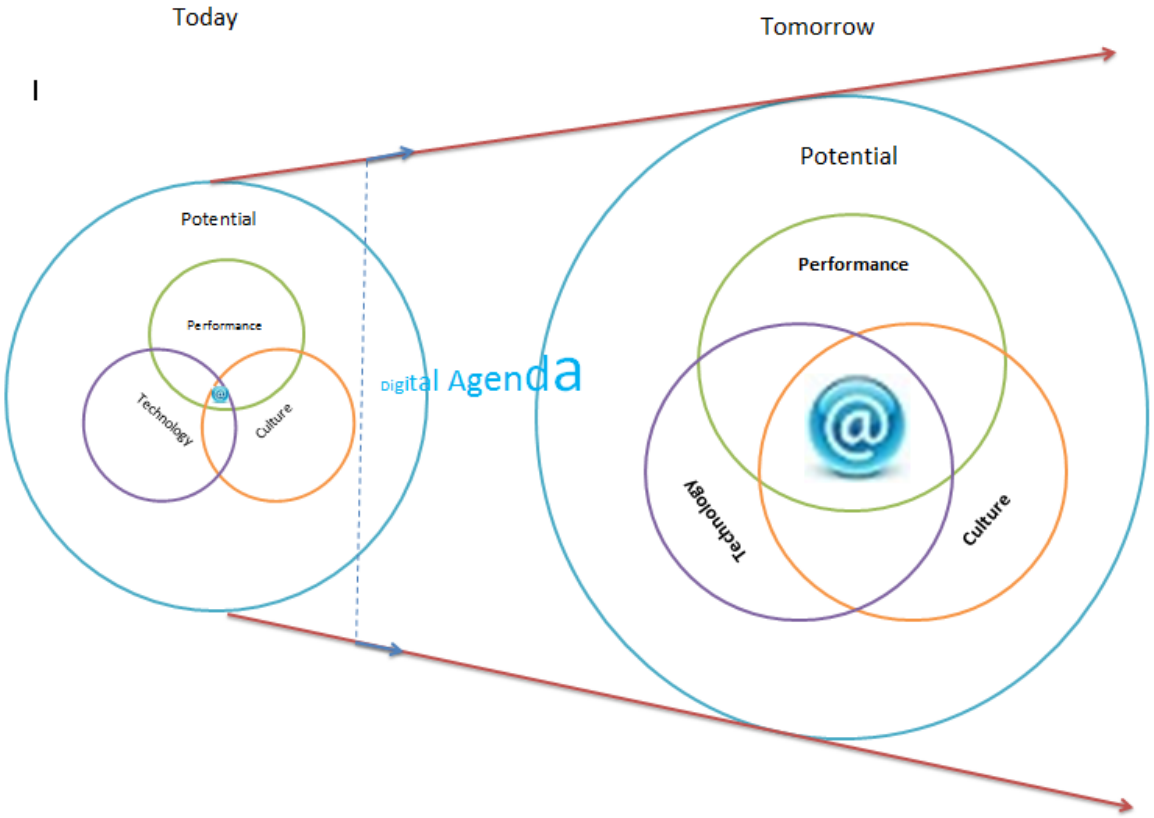
skills and the soft skills. From our discussion and understanding of the current and future pervasive digital world where digital is just the way we live and work in the relevant context then we will need to define and provide those new skills for all stakeholders these will include the appropriate technology skills, the process and procedural skills and the soft skills to maximise participation, contribution and impact, which will include things like teamwork and collaboration, communications, performance management, innovation, change etc.

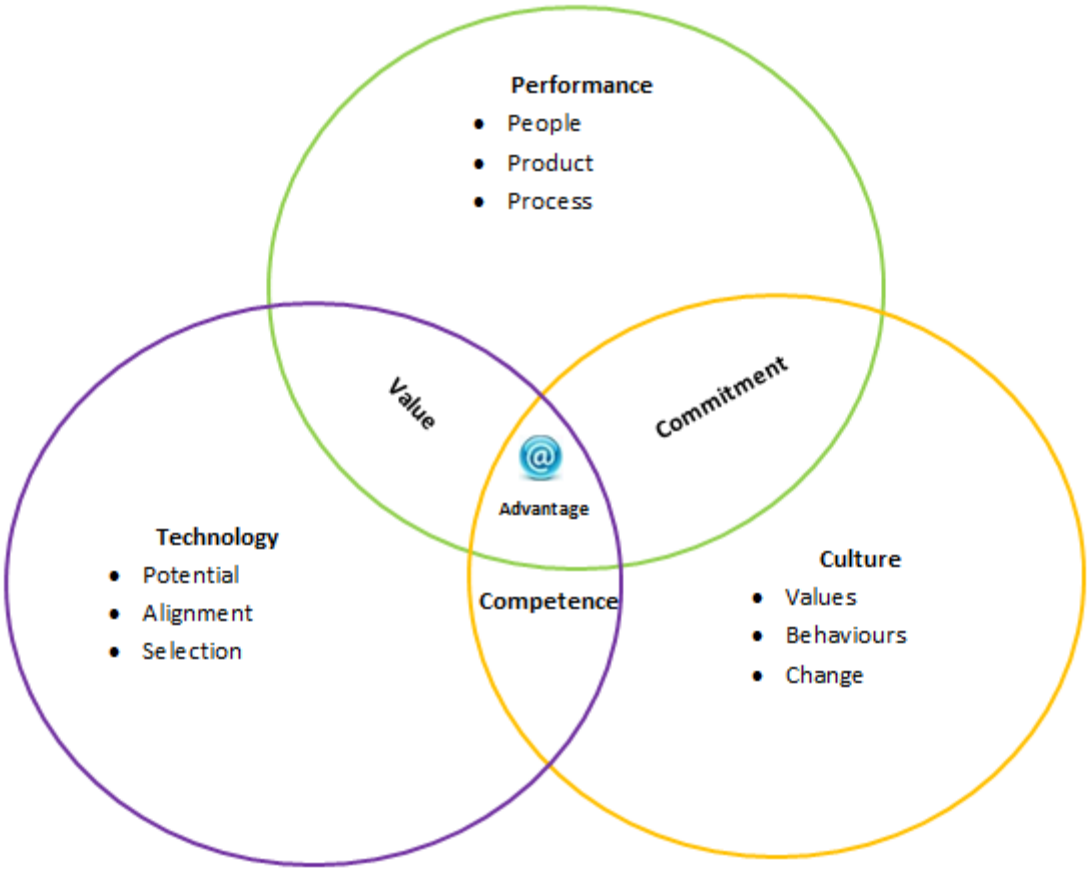
*Culture*

Culture is the ideas, values, customs, and social behaviour of a particular group of people or a society. Culture change is some adjustment (Major or Minor) that happens or is desired in the ideas, values, customs and behaviours. We have already observed culture change by individuals, groups and society enabled or caused by the various phases of the Digital Revolution. To change a culture as the goal rarely stands alone, it may change as an unanticipated outcome of some other intervention or change in our lives. However we often identify cultural traits that are negative as regards outcomes an example might be smoking or to impact business outcomes such as a low cost airline whose initial core value was cost and productivity and its target core value is customer service, as an example. In general culture change comes about as a result of an overall vision or aim for an individual, group or society of which culture is a key component. An existing culture will often determine the inertia associated with starting and completing a change so understanding the causes and variables that influence a particular culture is an essential part of creating an agile organic entity. In considering our Digital Agenda we will consider the current state and the target state when setting the agenda by reference to best practices, what leaders do, and many other benchmarks. One of the key tools to enable culture change is to identify common core values that are important and create alignment between individuals and groups as regards their values and the values of the target entity. What we aim to achieve is the creation of a values system. Values are beliefs that are held to deserve; the importance, worth, or usefulness of something and they determine principles or standards of behaviour; one's judgement of what is important in any context.

**Conclusions : Setting your Digital Agenda to create Digital Advantage**

We see this great opportunity for leveraging technology, changing the way we live and work for the betterment of society, and create advantage, however it comes with risks that need to be considered. If we were to have a simple model to demonstrate a high level methodology to create this Digital Advantage with our new Digital Agenda it might look something like the following:






The three core elements and their scale of integration will enable the creation and growth of Digital advantage, where they overlap and the scale of this integrative overlap determines the level of embededness into how we work and live and of course balance is critical they are interdependent. The advantage is the innovation value created.

***Establish the relative value of the possibilities***

The starting point must be extending our horizons and engagement with stakeholders and society to determine what is possible and is the relative value to stakeholders and society of each possibility.

***Create a vision, (*** *mission, goals, strategies and Value statement)*

The Vision in a sense is the first phase of innovation and change where we look beyond the senior/leadership team leveraging social extended innovation by engaging with the broader community. Remember the vision will include both the hard and soft capabilities, behaviours and outcomes. Your Digital Agenda will be embedded in your vision.

***Complete Capability & Performance, Analysis & Planning***

It's essential to understand what your current maturity and performance levels are (What is possible today to start a change), target capabilities (where you want to end up), and the stepping stones (what actions to enhance your rate of change) to create your digital advantage. Performance is about benchmarks and outcomes compared to standards but more importantly possibilities. Technology and Cultural capabilities are also central.

***Manage the change until change manages itself***

You have to facilitate change until the system is agile, responsive, innovative and you have changed the way you live and work fundamentally. Its Organic, think of it as an element of bio-engineering until the right DNA is embedded and the organism is self-sustaining.