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Decisions at lightning speed

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Part 1 of 8

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LIGHTNING SPEED DECISION-MAKING AND THE LOST ART OF STRATEGY

By Rob Hortopp

CFIO – FAST FORWARD 2035

INTRODUCTION

Business today is facing what is perhaps the greatest combination of challenges seen in a century. Capitalism is under attack, with confidence in the current economic system at an all-time low, and new laws and regulations on the horizon. Geopolitical changes, falling personal wealth, volatile resource markets, climate change and shifts in the centres of economic power will exert tremendous pressure on the future business environment.

While these international factors shape the global market, organisations also need to keep ahead of the increasingly fast pace of change in operating conditions. They are doing this by innovating at ever increasing rates – the average number of patent applications in the US rose five-fold between 1985 and 2009.¹ Adoption of these new technologies means the amount of data is exploding, with the number of servers expected to grow 10 times and number of

files by 75 times over the current decade.² And the impacts of some technologies, such as social media, are only just starting to be understood.

What does the way the world is turning mean for today's CFOs? How can they prepare for this cacophony of change?

To start with, we think the CFO of the future will need to combine finance and information skills to become an executive who delivers valuable business intelligence. This new role will evolve into the chief finance and intelligence officer, or CFiO.

But the future for business is not so much about what the CFO will be called as about the external pressures that will impact their role – and how they will change their role.

¹ US Patent Office

² <http://www.emc.com/collateral/about/news/idc-emc-digital-universe-2011-infographic.pdf>

Tomorrow's CFIOs will need to be ready for the real game changers – what we see as the main pressure points that will shape the world of business in 2035.

Partly this is so they can ensure they are ready for the challenge; that they're suitably equipped to be able to engage with the brave new world that the coming decades will bring.

But it is also because we believe the mega trends we have identified will have a fundamental impact in shaping the role of the CFIo of the future.

Engaging with these trends can help build a better idea of how the business world will look in 2035, and how the changes between now and then will shape the CFIo's role.

Forecasting is a dangerous game. You may agree with our ideas; you may not. That's not relevant here. Our purpose is to get everyone thinking about the main ideas and issues that will create the global market of 2035, and to open the debate and encourage discussion around these topics.

We want you, our clients, to be involved in this debate. We want to be alongside you as you consider the areas your businesses will need to focus on in order to continue to be global leaders in 2035 – to consider how to negotiate the obstacles and make the most of the opportunities in order to guide your organisations to greater growth and prosperity over the coming decades.

In this, essay #1 in our Fast Forward series, we now look at the first of those emerging trends; the concept of decision-making at lightning speed.

Today's businesses are flailing helplessly. They're overwhelmed by a rapidly expanding amount of information, and are battling to make sense of it. They're fighting on all fronts to adapt to seismic socio-economic shifts and changing goalposts as their operations and environments become ever more complex, while struggling to stay ahead of their competitors.

Right now, they think the answer lies in trying to build ever more complex systems to support ever quicker decision-making. This approach is fatuous and fatally flawed.

I believe that business needs to take a deep breath and learn that to do things quicker they must relearn the lost art of strategy.

Organisations must stop this desperate quest to stay ahead of the game. They have to stand back and focus on the bigger picture – on their overall vision and how the directions they are taking and decisions they are making fit in with this image.

Business needs to reclaim the lost art of strategising. Companies should do this by imagining different futures and developing scenarios for each of them. They need to predict every possible turn and to formulate pre-planned packages of decisions for each eventuality. These decisions, considered well in advance, can then be taken at the right time at lightning speed with the benefit of informed and measured intelligence about the real-life situation the business faces.

Sounds impossible? Not if organisations harness the growing power of technology to capture and make sense of the immense and fast-changing information data base that is available to them from the market. They need to understand what data they need, capture it and turn it into real intelligence.

By combining their scenarios with this intelligence, the organisation can finally make properly informed decisions.

While these decisions will look and feel as if they are made at lightning speed, they will represent many years of well thought through planning and analysis. What's more, they will be the new intellectual property, they will be the only remaining source of competitive advantage.

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The race is on

Imagine yourself at a Formula 1 event today. The competitors line up, sponsors look on and the owners take their seats. Once the flag is waved, the race starts off pretty much as predicted.

But then comes the game-changer; the abrupt shift in circumstances. Perhaps it's an unexpected deterioration in the weather, or one of the favourites is off the track. Suddenly all plans are out the window: all bets are off. Shouldn't someone get the owners together to make a rapid decision on what to do next? After all, races are won by taking the right decisions with split-second timing, right?

What's fascinating about Formula 1 is that although the game-changing choices are made far faster than in most other situations, they aren't off-the-cuff decisions. On the contrary – they're the result of months, years even of careful preparation and planning, of data capture and analysis, of refining a set of possible scenarios, and of having these pre-planned scenarios in place so that the most appropriate one can be selected instantly as and when the situation requires.

Motor racing companies have learnt the importance of stepping away from the day-to-day. These organisations have re-learnt the basic art of strategy – of investing time and effort into developing

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their scenarios, of turning their data into intelligence, and of formulating a pre-packaged set of strategies to be used to deal with situations that change in the blink of an eye.

That's Formula 1 today. But if we fast forward to 2035, this is how I believe all corporate decisions will be made.

In part this is because of the sheer mind-blowing rate of change going on all around, particularly in technology. According to author and investor Ray Kurzweil, "An analysis of the history of technology shows that technological change is exponential ... There's even exponential growth in the rate of exponential growth ... The twenty-first century will see almost a thousand times greater technological change than its predecessor."³

Today we are at the stage where technology has seduced and confused in equal measure. The move towards greater automation has become a quest without a cause. Organisations have tried to get answers from building ever larger and more complex proprietary systems simply to capture, store and make sense of the data. But they will fail trying to keep up with the pace of change, as these systems will be

out-of-date before they are even switched on. These organisations will always be chasing the leaders; never catching up but consuming ever greater amounts of resources in the progress. Failure will breed failure: what will follow will be a lack of confidence, greater conservatism, half-baked analysis, poor results – and missed opportunities.

These will be the lost organisations of 2035 – spinning off the track to never finish the race. In 2035 the successful companies will have rediscovered the lost art of strategy. All their decisions will be pre-packaged, with pre-agreed, pre-tested scenarios ready to be enacted at the push of the button – just as Formula 1 teams do today.

Infinite possibilities

Scenario modelling is today perceived as a geeky side-show that adds no value. I think this happened because modelling is supported by inadequate technology and is not clearly linked to strategic aims. By 2035 organisations will have regained the confidence and understanding of what strategising means and the need for having this range of scenarios in place.

³ Law of Accelerating Returns - <http://www.kurzweilai.net/the-law-of-accelerating-returns>

By 2035 I believe that organisations will be creating scenarios for everything. And I do mean everything, with organisations developing an infinite number of scenarios covering every conceivable eventuality.

Clearly creating and updating this infinite set will be beyond normal human capabilities. That's where I see the incredible technological advances of this century coming into their own, as super computers step into the fray.

Processing power in 2035 will be like nothing we understand today. Both IBM and Intel think we will be close to simulating the power of a human brain by 2025.⁴ Where the idea of an infinite number of scenarios seems daunting to anyone today, by 2035 this will be seen as normal.

This total set of scenarios will be ordered by hierarchy. The top-level basic large-scale corporate scenarios – the most important facets of the organisation's overall strategy – will be generated by people in the organisation. Underneath this top layer of scenarios will be various sub-layers. The further a company

goes down this scenario hierarchy the more artificial intelligence it will use in the development and refinement of its scenarios.

The employees in charge of scenario planning will be a top team of outstanding intelligence analysts. This team will bring together the best of systems architects with financial analysts and modellers and strategists, and will be the organisation's intelligent super hub – the real mission control of the business. This hub will sit at the very heart of the nano-sized corporate organisations that will dominate the business landscape by 2035.

The person at the top of this intelligent super hub will be the CFiO. But the "i" will no longer represent information as it does today. Organisations of 2035 will have gone beyond our current limited preoccupation with data. The "i" will instead stand for intelligence – for deciding what data is needed, for collating and analysing it, and for weaving it into models and scenarios to bring the best comprehension and perception to bear on a company's decisions.

⁴ <http://www.futuretimeline.net/21stcentury/2025.htm#humanbrainsimulations>

Informational alchemy

In its Digital Universe Study, IDC estimated that the world generated 1.8 zettabytes of data in 2011. During the next decade, the company expects the number of servers world-wide to grow by 10 times, the amount of information managed by enterprise data centres to grow by 50 times and the number of files by 75 times.⁵ Gartner estimates that enterprise data will grow 650 percent during between 2010 and 2015.⁶

Where will this information come from? I believe it will be generated from millions of sensors located internally and externally and which will collect data in real time. Sensors will exist in products, supply chains, consumers, in everything we touch and wear, and will use 3D nano-chips and carbon nano-tubes that will put today's technology in the shade. What's more, the cost of the sensor technology will have dropped dramatically, bringing this investment within the reach of all companies.

The real challenge will be not in the collection of data but for organisations to understand what data they need. The wise organisation will understand the purpose of the data it needs – how it comes together

and is combined in a way to create firstly information, and ultimately intelligence.

From analysis to thought

The intelligence will be fed into scenarios to set off decision-making triggers. The plans that these triggers bring forward will have been pre-determined, pre-imagined and pre-designed years in advance and will be continuously refreshed with the most up-to-date intelligence and the latest technological developments.

Once the trigger goes off, instinctive and rational decision-making will combine to enable strategies to be put into action at lightning speed. These decisions will not be risky as they'll be taken in a totally connected and controlled environment, where consequences are already understood and foretold.

As legacy systems whose purpose was simply to capture as much data as possible disappear, organisations will put less emphasis on physical assets and intangibles will become the most valuable part of their asset base. Employees will be empowered to explore information on their own, with organisations rewarding their contribution to the intelligence nerve

⁵ <http://www.emc.com/collateral/about/news/idc-emc-digital-universe-2011-infographic.pdf>

⁶ <http://optimalsapblog.com/2012/04/05/big-data-becoming-big-business/>

centres. Sharing of knowledge will be so fundamental, innate and advanced that it will form the very DNA of an organisation.

The phrase “knowledge management” will become obsolete and outdated as management will concern itself only with connectivity, information and intelligence. Intellectual Property in today’s sense will have long given way to Intelligence Potential as the driver of corporate value.

Captain at the wheel

In believe that in 2035 organisations will have a whole new breed of drivers at the wheel, new stars seemingly putting strategy into action.

Why will this be the case? By 2035 machines will still not have the innate ability of humans to read a situation, compute a vast amount of data and make a decision almost instantaneously.

The ability to make game-winning decisions will be valued like never before. This will be well governed, well rehearsed decision-making harnessing mankind’s unique ability – to make an instinctive decision based on the situation and intelligence available.

But I do think the driver – the human making the final decision at lightning speed – will be augmented, supported and have clear parameters. There’s already physical augmentation today: for example pilots are able to use eye movements to make their planes execute certain manoeuvres. In the future, this kind of augmentation will be at a brainpower level. With nano-technology or carbon chips integrated directly into the neural system, artificial and human intelligence will together deliver dramatically improved cognitive and learning abilities. So in 2035 the pilot or driver will still exist, as their instinctive power will be highly prized, but their processing and decision-making capabilities will be hugely boosted by technology.

In the highly networked, connected, integrated world of 2035, digitally enhanced employees will be empowered like never before to make these survival decisions without recourse. Empowerment, mutualisation and practice will remove unconscious bias and self interest to ensure that survival of the team and winning the race is the only legitimate pursuit.

No such thing as a sure thing

So what happens when there is an infinite number of scenarios to choose from, and the intelligence to make the right choice? Only uncertainty will remain. Uncertainty of what will happen next, when, to what degree, and in what order.

By 2035 the idea of there being any unknown scenarios will be a mark of the unintelligent and uninformed. Organisations will prize critical reasoning and rational analysis skills more highly than in the past. Multi-skilled simulation teams will slay the untamed variable. “Race day” will be about monitoring deviation from norms and collecting data for fine-tuning offline scenarios to mitigate all uncertainty.

In his 2008 letter to the shareholders of Berkshire Hathaway Warren Buffett stated that “the CEO of any large financial organisation must be the chief risk officer as well.”⁷ I would go further and say that understanding risk and uncertainty is vital to achieving competitive advantage in 2035.

In fact it is time for a new strategic role – that of the Chief Uncertainty Officer, CUO, whose main roles

will be to watch out for game changers and, most importantly, to eliminate uncertainty.

The CUO will have rare skill sets. They will be brilliant statisticians who are technologically superior to their peers. They’ll also be instinctive decision makers and exceptional communicators and will be the real strategists of the future. They will understand the commercial relevance of decisions and also the relationship between risk and uncertainty, and this will make them custodians of the organisation’s competitive advantage.

They will fundamentally reject the concept of ‘black swan’ events and their quest will be the eradication of this untamed variable. Above all they will understand the complexity of relationships and the need to simulate all imagined scenarios.

This will include investigating failures vigorously. Organisations will have realised that their predecessors made a huge mistake in trying to address the ever increasing pace of change through attempting decisions using historic information and data. Today will be seen as the era of irresponsible

⁷ <http://www.berkshirehathaway.com/letters/2008ltr.pdf>

and incompetent management where insufficient investment was put into turning the past events into information of great profundity. Failures will be investigated and understood – and this understanding will keep the organisation in pole position.

Forget the past

In 2035, organisations' competitive advantage will be their predictive and pre-packaging dexterity. The ability to pre-empt competitors with superior intelligence and their convergent eradication of all unknowns will be what sets these teams apart. Historic performance, industries, customer bases and geographies will become irrelevant.

In 2035, then, organisations will thrive or fall at developing this capability. Regulators who have finally understood this will have long forgotten the futile backward-looking “year that was” audit. Assurances will instead be sought from a forward looking purpose not parameters. Detailed and forensic assessment and testing of scenarios will be the main game. Internal and external assurance and a plethora of other race day marshalling teams will be formed of multi-disciplinary specialists: technologists, industrialists, strategists, financiers and lawyers will be the

“assurance” team of the future. Future performance will be all that counts and the external assurers will know this.

Starting the journey

Organisations around the world are already starting the shift from operational to analytical. A survey by New Intelligent Enterprise Global Executive Study and Research Project in 2011 found that 58 percent of the respondent companies had leveraged analytics in business to create a competitive advantage for themselves – this compared with just 37 percent in 2010.⁸

Companies are breaking down organisational silos to centralise their analytical resources to increase the leverage and efficiency of their analytical talent pools. For example, Procter & Gamble has combined its multiple analytics groups, allowing the resulting unified group to network more cohesively with the rest of the organisation and to increase resource optimisation.⁹

A 2010 MIT Sloan and IBM survey of 3,000 executives found that top-performing organisations employed analytics in business five times more than lower-performing ones.^{10 11}

⁸ <http://www-05.ibm.com/de/solutions/asc/pdfs/analytics-the-widening-divide.pdf>

⁹ http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture_How_to_Create_a_Talent_Powered.pdf

¹⁰ http://www-935.ibm.com/services/us/gbs/bao/pdf/Smarter_Industries_Symposium_Day_1_General_Session_F_Balboni.pdf

¹¹ <http://www-05.ibm.com/de/solutions/asc/pdfs/analytics-path-to-value.pdf>

The growth in demand for analytics professionals means companies will need to spend significantly greater resources than those spent in the past on building the skills sets required. In December 2011, IBM announced expansion of its advanced analytics training program in India, China, Ireland and Scotland, working with global universities to conducting training focusing on predictive and business analytics.

In India alone, IBM is working with faculty members from 500 universities to help more than 30,000 students develop skills in predictive analytics.¹²

As I outlined above, Formula 1 is already using this revolutionary approach to strategy and planning as the basis of lightning speed decision-making. However it's not the only business to use scenario planning right now.

Insurers across the globe, particularly personal line insurers, are avid users of predictive models. These help them gain a better understanding of current and future risks and leverage this information to improve their risk segmentation, underwriting, pricing, claims and marketing decisions.¹³

Another industry embraced the art of pre-packaged decision-making as the 21st century dawned, using pre-determined automated trading strategies and setting parameters to make decision at lightning speed – banking.

Surely this is a terrible example? Not at all. It highlights the importance of proper business intelligence, as this would have helped in avoiding the financial crisis. The banks had the right idea – they created real-time systems, building automated trading strategies with clear parameters, tolerances and trigger events. But they failed to realise the importance of proper business intelligence, effective governance and control. This could have helped the banks in collecting quality data, reviewing their statistics regularly, identifying flaws and frauds, validating the assumptions, and converting data into intelligence through analytical tools. In short, the art of genuine strategising was lost on banks in favour of the pursuit of short-term gains.

Brave new world

By 2035, organisations will have realised that their predecessors today made a huge mistake in trying to address the ever increasing pace of change by trying to make decisions on a real-time basis.

¹² <http://biztech2.in.com/news/business-intelligence/ibm-ties-up-with-universities-for-biz-analytics-training/123742/0>

¹³ <http://www.actuarialpost.co.uk/article/insights—predictive-modelling-252.htm>

THE CHIEF UNCERTAINTY OFFICER, WILL BE THE CFIO'S RIGHT-HAND ADVISOR AND WILL CONTINUALLY BE PUSHING THE INTELLIGENCE SUPER HUBS TO ELIMINATE UNCERTAINTY.

They will long ago have realised that they needed to change their approach. They will have done this by re-learning the art of strategising – by creating scenarios for everything, and by testing, remodelling and repackaging decisions.

This will have a fundamental impact on their organisation, with significantly greater investment required in people and technology. Silos between strategy, finance and IT will break down, with the CFiO in overall control.

The heart of the organisation will be the intelligence super hub, which will replace today's management reporting teams. Critical reasoning and scenario modelling skills will be the focus of these hubs; decision masterminds will sit in the centre and make lightning speed assessments and selections from a pre-planned suite of choices.

Risk will not be viewed the way it is today – it will be seen as a way of eliminating uncertainty in scenario planning. The Chief Uncertainty Officer, will be the CFiO's right-hand advisor and will continually be pushing the intelligence super hubs to eliminate uncertainty.

Competitive advantage will come from the ability to strategise, to understand the scenarios, to use the data to derive intelligence and to have complex feedback systems keeping all elements up to date all the time. Only with this solid and powerful strategic base behind them will companies be able to make meaningful decisions at lightning speed – decisions which enable the organisations to excel in their endeavours and keep themselves at the front of the pack.

ON THE RIGHT TRACK?

Questions to reset your assumptions

- ☐ Is your organisation a strategic leader or follower?
- ☐ How closely does your business plan predict reality?
- ☐ What is your organisations track record of spotting game-changers?
- ☐ What is your organisations approach to uncertainty and how acceptable is the concept of 'unknown unknowns'?
- ☐ Do you know where to find your corporate intelligence?
- ☐ How functionally integrated are your organisations corporate intelligence teams?
- ☐ How highly do you prize critical reasoning and analysis skills?
- ☐ How regularly do you and your teams scenario play or war game? Where are these held?
- ☐ How often do you review and update the corporate sensors and data points critical to building and updating scenarios?
- ☐ How agile and integrated are your 'intelligence' systems?



Biography

By Rob Hortopp

Today I am a management consultant at KPMG in the UK. I qualified as an ACA working in audit and consulting, but was seduced by a technology start up designing early digital music solutions. Richer for the experience than my bank account I went on to travel and work in Australia. Returning to the UK I became Finance Director role for a Space, Defence and Intelligence business. Traditional Finance, however, is a career for some but not all.

The triple dip recession keeps me busy helping organisations get a grip of their finances and transform finance and control functions. Many organisations did not foresee this economic scenario let alone plan for it.

In 2035, I am no longer reacting to the future but helping to define it. I run an ISH (intelligence super hub) for an S&P500 organisation, I report to the Group CFiO based in Rio although I have no fixed location myself. I travel the world with a small analyst team working with divisional CEOs to helping them understand the future scenarios that will impact their business. Its complex work as we model scenarios on the fly supported by the super hub feeding us data and analysis in real time. It's also extremely demanding and intensive for the CEOs, its weeks not days now, but they know that we have out smarted the competition on each of the last two games changers.

In reality this is not Finance as we knew it. Today the intellectual challenge, creativity, people, technology – its immense. Business for us, it's a far cry from the unforeseen events of twenty years ago, mind you we started planning for the next depression five years ago and its going to create a fantastic game-changer.

Contact us:

For more information on the Fast Forward series, please email us at fastforward@kpmg.co.uk

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