

This article is derived from a presentation given by CaseWare Australia & New Zealand CEO, Craig Waldon at ATSA 2016 - "The Future of Auditing. Are You Ready?"

Where are we today and what does tomorrow have in store?

Change is now a constant in our world. It's here - and the pace of change is becoming increasingly faster. For auditors, there are all sorts of challenges right now, and in the short, medium and long term. Are you aware of what some of those challenges are and how new technologies might be able to assist?

Professions are changing

In Richard and Daniel Susskind's book "The Future of the Professions" they examine how technology will transform the work of human experts¹. An interesting read, and a good summary of the way most media and commentators are highlighting that fundamental shifts in the way we work, and how many of us will do meaningful work in the future.

The professions are changing...

"... lead us to conclude that, in the future - in the fully fledged, technology-based Internet society - increasingly capable machines, autonomously or with non-specialist users, will take on many of the tasks that currently are the exclusive realm of the professions." (p.231, OUP Oxford, Kindle Ed).

Auditors are not immune to the way technology will transform their work. The decreasing cost of technology combined with the increasing cleverness of software applications and the accessibility of large swathes of data dictates that the transformation will likely manifest very soon. In the foreseeable future, auditors will move towards testing 100% of the data - in some cases, this may add up to multi-millions of transactions.

¹ Susskind, Richard; Susskind, Daniel (2015-10-22). The Future of the Professions: How Technology Will Transform the Work of Human Experts. OUP Oxford.

“Leading auditors also say they are on the **brink of fundamental change**”

In both audit and tax, experts predict that all financial data will come to be represented in some globally accepted standard form,... and that their work will largely then involve running ever more **powerful algorithms, searches, agents and routines across the data**. While the traditional auditor may claim that this will never replace the '**judgement of the auditor**' (for example, as to whether the client is handling provisions appropriately), the market leaders are now looking very seriously at how **artificial intelligence** can also help here.” (Susskind, Richard; Susskind, Daniel (2015-10-22). *The Future of the Professions: How Technology Will Transform the Work of Human Experts*. OUP Oxford, Kindle Ed).

Examples of how technology is impacting other industries abound. Here are two examples of the evolution of IBM’s “Watson”:

Legal - [ROSS and Watson tackle the law](#)

Medical - [IBM's Watson Supercomputer May Soon Be The Best Doctor In The World](#)

The big shifts predicted here will likely also be in the foreseeable future for auditors and other financial professionals.

Big Data

The sheer volume of data now available, combined with cheaper computing and processing power will drive changes to our working lives as we currently know them.

From the dawn of civilization until 2003, humankind generated five exabytes of data. Now we produce five exabytes every two days...and the pace is accelerating.

Eric Schmidt,
Executive Chairman, Google

Learn more

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BIG DATA
BERNARD MARR

BIG DATA
IN PRACTICE
BERNARD MARR

<https://techcrunch.com/2010/08/04/schmidt-data/>

Just think about everything you know that generates data. Now include all the usual social media sites (FaceBook, LinkedIN, YouTube, Snapchat, Twitter), data from connected machines which includes the IoT (Internet of Things)... The pace of data growth is exponential.

Traditionally, audit has focused on financial transactional data, but now has access to emails, e-chat, social media, as well as access to data from third parties including stockbrokers, insurance brokers, banks, real estate valuations, actuarial certificates... and so on. With hindsight, it is speculated that the Enron disaster could have been prevented with better access to non-financial data, like the Enron emails that have now been made public.

An auditor needs to wade through all available data and decide what is important - then, how to deal with it.



"The biggest disruptor that we are sure about is the arrival of **big data and machine intelligence**. This disruption will not only change every business globally, it will also have an important impact on the consumer."

Google Chairman Eric Schmidt

Machine Intelligence

The above quote from Google's Eric Schmidt applies to all businesses in our increasingly global economy. Again, the audit profession will also be impacted by these disrupters - big data and machine intelligence.

Big data is here - we're just looking at the best way to investigate and slice and dice it. A massive amount of investment and work is also concurrently occurring on "Machine Intelligence" - throughout almost every industry. Machine intelligence will take on big data - it will "read" huge volumes of data very, very quickly and "learn" from it. People will be able to ask plain english questions and get answers instantaneously. Machines then learn from the questions and the answers get better... and better. Think of the way that Google has developed from a simple search engine to what it has become. That's the future for big data combined with machine ("artificial") intelligence.

The Big 4 - What are they doing?

The Big 4 are investing in technologies to exploit Big Data and Machine Intelligence. Lots of published material attests to the fact that they are spending huge amounts on research and technology and employing some of the finest minds in the fields of data and machine/artificial intelligence.

The Big 4

While the ability to capture and store vast amounts of data has grown at an unprecedented rate, **the technical capacity to aggregate and analyze these disparate volumes of information is only just now catching up.**" (EY. Big Data - Changing the way businesses compete and operate. April 2014)

that the future of audit was **'the capacity to examine 100 percent of a client's transactions'**. (KPMG's James P. Liddy)

We are seeing **analytics and visualizations** deployed to improve risk assessment, better focus the auditor's time, yield more meaningful questions, and identify what really could go wrong in the financial statements. (Will Bible, Audit Partner at Deloitte & Touche LLP)



Future Changes - The Future of Audit

Will the traditional audit disappear in the future? This is almost without doubt. Most of the work of a traditional audit will be automated, and in fact, most likely improved with access to big data and ability for machines to systematically and without bias, test and interpret results.

Yes, there are lots of changes on the way, with debate about how soon some of the big disruptors will arrive, but have no doubt that they will be here and the impact on the traditional audit and the auditing profession will be profound.

Audit will remain important...



“I am very bullish on the Audit profession.... It is absolutely essential to the running of capitalism.”

Dwight Wainman,
CEO of CaseWare International

What Are the Coming Challenges for Audit?

What do we see as the coming challenges?



Staff - Skills & Abilities - Location

What are the skills your team will need in the future? A traditional auditor's skills will no longer be the only requirement for your team to compete effectively with the rest of the industry if the predicted disruption of the profession pans out. Data analysis experts will be key - can these be combined with the abilities of traditional auditors? This may be the answer for a small team.

Be very clear - the Big 4 are combing through the latest University graduates and looking more and more at **non-traditional skills** to employ in their audit teams. It is a reflection on the changes they see coming - some would argue, are already here.

Is **location** important? Traditionally, auditors are not concentered at head office, often requiring to be out in the field to do their work. Will this continue? Does it matter? Do they even need to be in the same country? The answer is that skills are more important and your team can reside wherever they are, with technology solutions now able to ensure the location of your team is the least problematic of team logistics considerations. As an example, the makers of the BaseCamp project management software have 50 staff spread out across 30 cities around the world.

Stakeholders

The challenge of managing stakeholders and their expectations and requirements, will continue for auditors. It may just get a bit more complex. There are lots of **stakeholders** involved in Audit:

- Society
- Capital Markets
- Shareholders
- Government Regulators
- Those Charged with Governance
- Employees
- The list goes on...

There will be a continual challenge to manage expectations around auditors being able to find everything material to do with an effective audit. With the speed of data growth, the volume of data and the complexities of data and relationships, it may not be quite as simple as some stakeholders expect, even with the leaps and bounds likely provided by technology.

There will a need to engage with stakeholders to make sure they understand what is involved and that their expectations are realistic. There must be effective communication at all stages of the audit and the latest technologies need to facilitate this.

There will be a further challenge for regulators to keep pace with change and update requirements to suit the needs of a data driven society. There may even be a need to drive legislative or standard changes, so that there is a high level of common understanding across all the stakeholder groups.

What is CaseWare Doing to Assist?

CaseWare has a deep understanding of the audit and financial reporting field having delivered software solutions for accountants and auditors over many years, and a long history of innovation. CaseWare has always ensured compliance is a key driver of our software and technology updates and constantly addresses the needs of quality, efficiency and effectiveness in audit.

And with the future in mind, some very bright University minds are right now assisting CaseWare with developments in all of the areas that will challenge ('disrupt') the audit profession.

We have software now to help streamline your business, we have new software just around the corner to take data analysis to a new level, and we have R&D underway for the future.

Current CaseWare Tools

CaseWare Online

CaseWare Online is a suite of software tools that will help you **stay in Sync with your Audit team**.

CaseWare Online brings our audit compliant CaseWare Working Papers to the Cloud with increased functionality to provide a more complete audit team working environment.

CaseWare Online allows your team:

- Seamless **synchronisation of engagement files** between audit staff.
- Fully functional online **and offline** access, with sophisticated team and audit project management tools.
- Secure **collaboration tools** for communications between staff and with clients - a fully secure, client portal complemented with an integrated document management system that can manage and store all types of files.
- **Secure file access** - very granular security to ensure only those with permission can access client files and information.
- **Engagement Management and Workflow tools**, including access to online Time and Billing apps.

All of this delivered without the need for on-premise servers and IT support. The cloud CaseWare Online service is hosted by Amazon Web Services in NSW.

CaseWare Q

CaseWare Online comes with a whole suite of specialist tools, including **CaseWare Q**. This tool is designed to promote quality audits and increase your team's efficiency, while making it easier to meet firm and professional standards. Quite simply, CaseWare Q works with CaseWare Online files and provides a better way to track information on all your engagements and to manage your files for an engagement, or team, or entire firm.

Able to be modified to your requirements, CaseWare Q can collect, track and report on:

- Completion of key documents
- Key deliverables - documents that need to be completed
- Statuses - track stat
- Signals - certain fields are tracked and when certain values are exceeded they are reported

CaseWare Q Landing App

CaseWare Q in Working Papers

CaseWare Q Detail App

Management

Status	Field work started (2/26)
Hours (actual, budget)	0/00 8/00
Assets (actual, budget)	0/00 132,000/00
Not started	9
In progress	1
Waiting on	2
Delayed	3
Completed	3
Assess	
Audit opinion	Modified - Qualified 27/01/15

Financial

Financial statement	
Revenue - Real	8,140,887.00
Income before tax - Real	234,712.00
Assets - Real	1,285,089.00
Total (real - Real)	0.00
Materiality	
Overall materiality (preliminary)	50,000.00 163,000.00
Real	
Performance materiality	42,500.00 139,237.00
Significance level	
Adjustments	
Adjustments (actual, proposed)	4/00 3/00
Proposed total (Income statement)	275.00

What's happening

Significant risks	5
Number of proposed adjustments	3
Issues - Waiting on	2
Issues - Not started	9
Talored work programs - material areas	2

Deliverables

Issue	Scheduled	Regulatory	Delivered
Engagement letter	20/06/14		08/09/15
Management letter	20/06/14		
Audit findings letter to those charged with governance (TCMS)	15/08/14		
Representation letter	15/08/14		
Final financial statements	15/08/14	25/09/14	

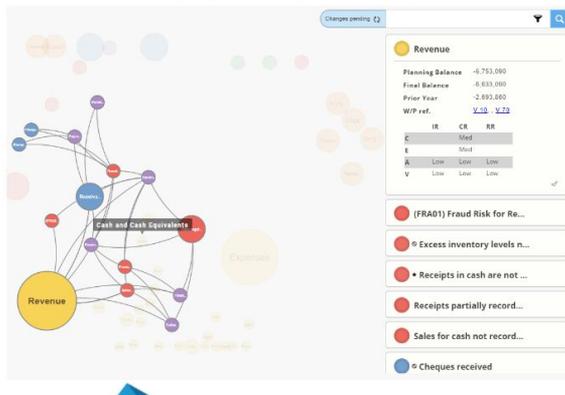
Audit

Risks/Controls/Reportable Items		
Risk identified (significant, all)	5	21
Control (by all)	7	9
Reportable items (top issues, recommendations)	4	7
Efficient, Effective Audits		
Documents		
Talored work programs (material, not material)	2	0

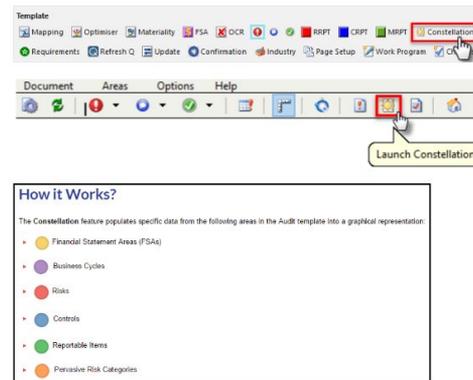
Lewkowicz Furniture

Created By: Sarah Butler
Last Modified By: Sarah Butler
Created: 29/01/15
Last Modified Date: 29/01/15
Workflow Stage: Received

CaseWare Constellations



Launching Constellations



Once populated by the data in the file, you are able to identify:

- relationships between the data - size will give an indication of importance
- key areas that need to be addressed or review
- areas that have not been addressed - outliers

CaseWare Constellations is interactive, allowing you to hover over nodes and see the relationships as well as filter and drill down to more information, including the audit documents where they are addressed. We're working hard on further interpretations of data and these developments will appear in our Cloud based applications.

CaseWare SMSF Audit

CaseWare is also *developing specific applications using Cloud technologies*.

Our first release in Australia is specifically for SMSF Audits.



CaseWare SMSF Audit is an example of a totally online tool targeted at a very specific audit type. It illustrates just how we can utilise the Cloud effectively.

Seeing the audit in a different way to CaseWare Working Papers, the focus has been efficiency for the smaller audit that is SMSF. Available right now and lauded by our customers, CaseWare SMSF Audit:

- utilises CaseWare Cloud to provide secure anywhere anytime access
- includes time saving technology like:
 - File Optimiser
 - Smart content
 - A Dynamic Trial Balance
 - Automated file setup from Administration platforms
 - Query module to enhance collaboration between auditors and accountants
 - True paperless audit with superior document management
 - and, for subsequent year files, efficient carry-forward technology

What of the future?

CaseWare is very aware of the challenges about to explode in the audit and financial services world that will impact almost every professional working today.

Be assured that we are working on big data and machine intelligence and just how that will make sense to incorporate into our products to assist you to provide great quality audits in this different and challenging time of change.

Our commitment to quality and compliance remains resolute.

We hope you come along with us for the ride.