



30 April 2019

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2019 MACQUARIE AUSTRALIA CONFERENCE SPEAKING NOTES

Attached are speaking notes for the presentation that ASX Managing Director and CEO Dominic Stevens will deliver to investors at 4.00pm today at the Macquarie Australia Conference in Sydney.

The presentation provides an update on operational and strategic matters disclosed at ASX's 2019 interim financial results and in the March 2019 activity report.

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2019 Macquarie Australia Conference

Dominic Stevens, Managing Director and CEO

Presentation and Speaking Notes

30 April 2019

(Check against delivery)




Good afternoon.

My name is Dominic Stevens and I am CEO of ASX.

Thank you for joining me this afternoon for an update on the progress we are making at ASX.

Agenda	
01	FY19 update <ul style="list-style-type: none">• Volume and activity as at end of Q3
02	Major projects update <ul style="list-style-type: none">• CHES replacement• ASX Net, Secondary Data Centre, DataSphere, Sympli• Stronger Foundations program
03	Open infrastructure solutions that help our customers <ul style="list-style-type: none">• Create new products and services• Improve operational efficiency• Reduce risks and costs

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My agenda today covers three main areas.

Firstly, volume and activity over the previous nine months, calling out changes since we reported our December 31 numbers in February. Some of you might recall that in the past we have provided nine-month financial numbers at this conference. We have decided to discontinue this practice to concentrate our financial updates at the half and full-year results. We are confident that anyone tracking ASX's progress between results can do so by using our monthly activity

reports. This approach allows me to spend more time talking about ASX’s longer term strategy. However, I will talk to and confirm the expense and capex guidance we currently have in the marketplace.

Secondly, I will give an update on major project work in progress at ASX, some of which will go live over the course of calendar 2019.

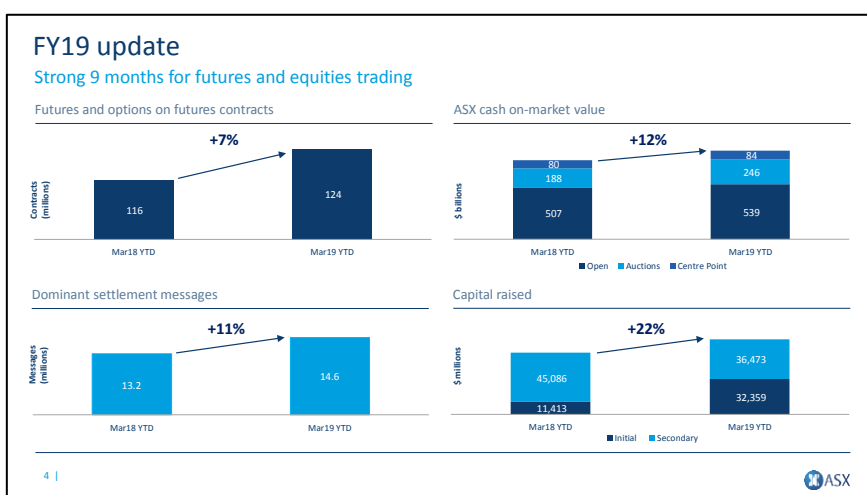
Thirdly, I will explain that ASX sees its raison d’être as building infrastructure solutions for the financial community that enable the industry to:

1. Create new products and services
2. Improve operational efficiency
3. Reduce risks and costs.

We strongly believe that achieving these goals will create a more vibrant, innovative industry, which will generate significant benefits for our customers and in turn create opportunities for ASX to provide even more value-added services.



So let us begin with how ASX is tracking at the nine-month mark.



The March quarter is usually a subdued quarter for ASX given the inclusion of January, the summer holiday month. However, last year the March quarter was particularly strong. Pleasingly, 2019 has also been unusual, with strong activity posted across many of ASX’s products and services.

In our futures business, volumes continued from the strong final quarter of calendar 2018 to see a very positive start to 2019. Volumes in the quarter for futures were 45 million contracts traded, which included a record month in March where futures volumes topped 22 million contracts, and also a record day when more than three million contracts

were traded. This sees volumes at the nine-month mark at 124 million contracts, which is 7% higher than the same time last year. Pleasingly, the interest rate markets have come alive in the first quarter, which is our largest traded asset class. The increased uncertainty around the direction of rates has been a key driver of futures volumes, and in tandem with this there has been a significant increase in swap activity, particularly in overnight index swaps. This has seen volumes increase significantly in OTC clearing in the last three months. Average monthly cleared volume over this quarter has been almost one trillion dollars, which given the previous record month was \$695 billion, shows the magnitude of the increase.

Our other main trading business, the cash equity market, has also seen elevated volatility and volume. In the first three months of the calendar year on-market volumes averaged \$4.6 billion per day. While not as high as the December quarter, it's still a strong result. This has seen the year-to-date volume of equity trading up 12% compared to this time last year. This feeds through to equity clearing and settlement, where - as you can see - settlement messages are up 11% on a year-to-date basis.

At the half-year, I talked about a positive result from listings, but suggested that the second half was going to be more challenging. At that time, we had just seen the market fall circa 15% off its highs and IPOs looked like a less attractive option for issuers in the short-term. Since then the market has recovered from that sell-off and accordingly the outlook for capital raisings has improved. In April, we saw SunRice, Next Science and ReadyTech float and we are more confident about the future pipeline, particularly as the market strengthens. As a side note, the US IPOs of Lyft, Pinterest and Zoom, and the upcoming float of Uber, will be important to watch to see how the listed market absorbs some of the higher profile unicorn tech companies.

FY19 update


Costs and capital expenditure on track

Moderation of heightened interest revenue in March 2019 quarter

- Money market spreads remained elevated albeit moderating
- Average end-of-month collateral balances were lower than 1H19

On-track to meet expense and capital expenditure guidance for FY19

- Operating expenses expected to grow at approximately 9%
- Capital expenditure expected to be approximately \$70-\$75 million

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Given the increased interest at the half-year in the size of collateral balances and the heightened spreads in the short-term money markets, I thought I would provide a short update on this. Since the half-year, money market rates have remained elevated, albeit moderating, and end-of-month collateral balances have on average been lower over the quarter, but ticked up at the end of March. I might also point out that these balances are reported in our monthly volume updates.

Finally, on expenses and capital investment.

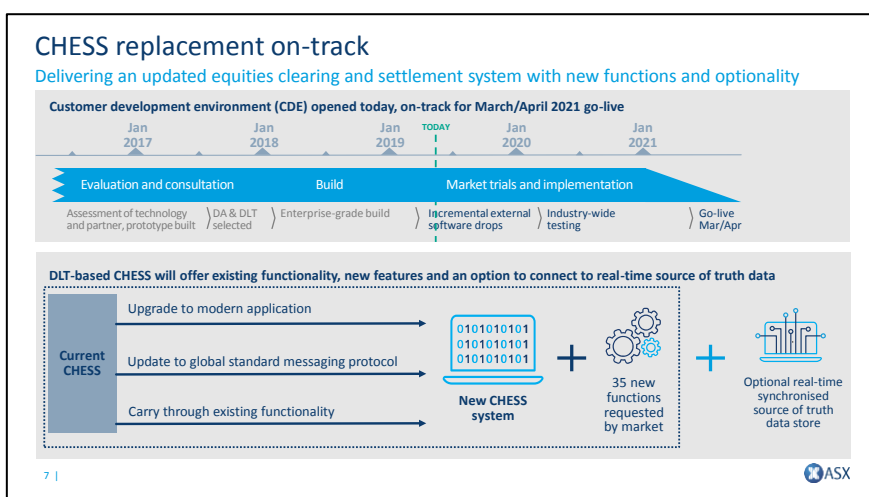
There is a significant amount of work in progress across ASX, and I am pleased with the ground being made on a number of initiatives.

We remain on track for FY2019 expense growth to be approximately 9%. Although, I would say anecdotally, that the demand for technology people, operational people and risk people has greatly increased post the Hayne Royal Commission, which will provide pressure into future years for all financial services companies, including ASX.

Similarly, capital expenditure remains on track to be around \$70 to \$75 million as previously guided.

Major projects update

Our investment program is a good segue into giving an update on the major project work underway, which is part two of our agenda today.



I will start with the CHES replacement project, one of the most keenly followed technology projects globally in financial markets and one that continues to run to schedule.

Importantly, the CDE, or customer development environment, opened on schedule today. This allows customers to start experimenting with the new DLT-based CHES environment and build connectivity to it, before industry-wide testing begins next year. Today's drop of software into the test environment is the first of seven over the next year, so it is early days. They will be landing every six to eight weeks and will allow customers to look at business functionality and compare the range of access options, such as updating to the global message standard - ISO 20022 - or directly integrating to a node to get real-time access to the source of truth.

Importantly, we continue to engage with many stakeholders across the financial services community, including our regulators. In recent meetings I've attended, CHES replacement discussions have focused on some of the following areas.

Firstly, what CHES replacement is. Specifically:

1. It replaces an existing COBOL system. CHES put Australia at the forefront of clearing and settlement technology globally when it was implemented in 1994. This system, while still performing well, is not a platform for the 2020s and beyond so the question is not "if" to replace but "when?" and "with what?". Similar discussions are taking place at financial institutions all around the world
2. It replaces the proprietary CHES messaging protocol and moves Australia to the global ISO standard that many market infrastructures and central banks (including the RBA) are already migrating to

3. It carries through the existing functionality of CHES to ensure that the new system is able to do what the old system did
4. It adds 35 new functional specifications which were developed over an extensive consultation period of 18 months with working groups representing the broad market
5. And finally, it offers choice and gives users the option to connect to the real-time source of truth – an exciting capability that enables the industry to reduce risks and costs, as well as create innovative new services.

Almost as important, in the many conversations we continue to have across the industry, we’re reiterating what CHES replacement is not. Specifically:

1. CHES replacement will not be changing rules to require parties to provide new information to the system (an incorrect rumour has been circulating about this)
2. CHES replacement is not requiring parties to move away from message-based connections if that is how they want to connect to the system
3. And CHES replacement will not increase the cost of like-for-like services that are carried through to the new system.

Other projects on-track

Adding resiliency and capability across the group

ASX Net Communications network

- Completed network upgrade
- Migrating customers and services in 1H20

Secondary Data Centre

- Building hardware for new facility
- Commencing technical migration in Q1 FY20 with commissioning in Q2 FY20

DataSphere – ASX’s data analytics capability


- Completed the build of DataSphere’s technology and governance capabilities
- Rolled-out internally and will be made progressively available to customers

Sympli joint-venture technology build

- Demonstrating efficiency gains
- On-track to begin financial transactions before end of FY19

Stronger Foundations

- Completing program investment by end FY19
- Transitioning into business-as-usual activities from early CY2020

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A second major initiative underway is our project to consolidate and enhance the ASX Net communications network. Recently, the RBA was placed onto the new infrastructure. This means that connectivity to the RBA RITS payments infrastructure for the country now runs over the upgraded ASX Net. In the next six months, connectivity to all ASX services and third parties, such as Trading Technologies, Activ and Yieldbroker, will be rolled out and the full project finished by September 2019.

Thirdly, the commissioning of a new secondary data centre continues apace. This will be completed around the end of calendar 2019. It will provide a more contemporary backup to our primary site, the Australian Liquidity Centre in Gore Hill, and continues our commitment to constantly improving and updating underlying infrastructure.

Fourthly, the ASX data analytics offering, christened ASX DataSphere, has been delivered. Over the past three months, it has been rolled out internally to the ASX listings and investment products business where we are looking at listing trends, market-making statistics and possibilities for AI-based efficiencies.

ASX DataSphere is also in the process of curating and loading data sets onto the platform from both internal and external sources, and is looking to roll-out to external customers over the next month.

Lastly, and in relation to one of our strategic revenue growth initiatives, our joint venture Sympli, a new e-settlement platform for the conveyancing, legal and banking communities, continues to move ahead. Sympli is on-track to achieve its goals of closing financial transactions by the end of this half and demonstrating the significant efficiencies of our system to both banks and conveyancing firms.

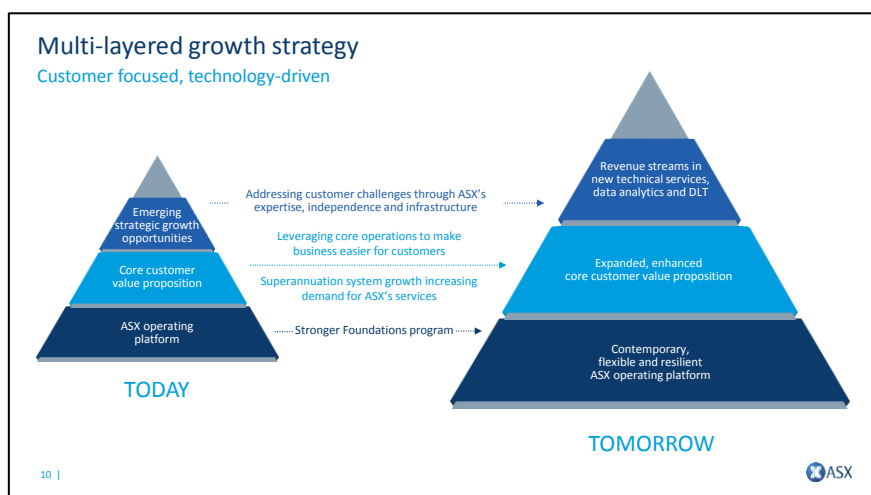
In addition to the above, we have spoken over the past year about a number of projects related to strengthening ASX’s foundations. These projects include:

- Enterprise and technology risk management and
- Clearing risk.

Much of this work will complete over the course of 2019 with the people and new tools in place. From there, these projects will transition into a business-as-usual focus on continuous improvement. Here, they will match the work we do in listings compliance, where our focus on evolving and strengthening ASX’s rules and guidance framework is ongoing.



This leads to the final part of my presentation – which is, that a key part of our strategy is getting the foundations of a contemporary, open infrastructure in place so that ASX can offer more value-added products and services to our customers.



I have previously spoken about ASX’s multilayered growth strategy.

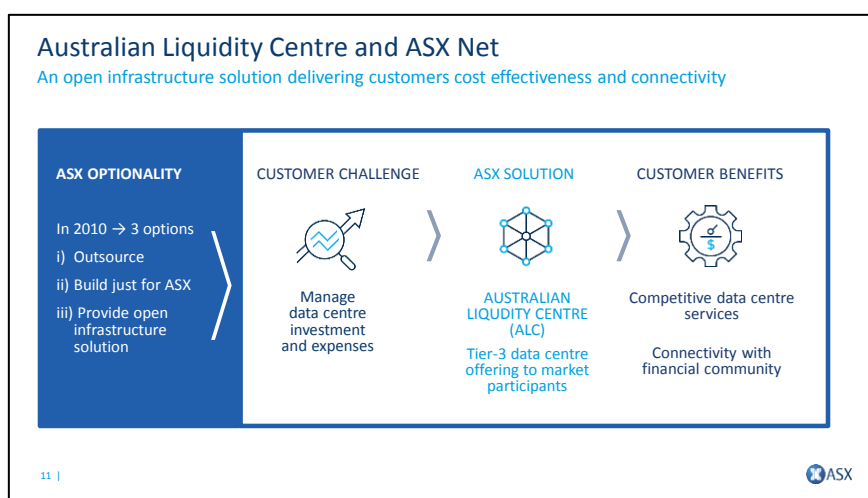
To begin, ASX has as a base:

- A strong operating platform, which provides services in a highly resilient, secure, trusted and transparent manner, and
- On that platform sits a range of products and services that make up its core customer value proposition.

To enable growth, ASX thinks of this in three ways.

- Firstly, ASX needs to maintain a flexible, contemporary operating platform. If we didn't, then the ability to add products and services will diminish over time. Examples of this investment in our platform are the Stronger Foundations program and the significant technology upgrades underway.
- Secondly, there are a number of ways ASX can continually improve its core customer value proposition
 - This can be additional products and services, such as:
 - The Australian Liquidity Centre – where we have developed services that enable customers to efficiently connect to ASX and to each other. I will talk more on this in a moment
 - ASX Benchmarks – where we have redesigned the BBSW calculation methodology, and has led to us looking at developing other benchmark products
 - ASX Collateral – which now efficiently manages around a third of the daily open market operations of the RBA and may now extend into the broader repo market in general
 - Or it can be growing our customer base:
 - By bringing offshore traders to access our market, or attracting foreign listings
 - In addition, like others in financial services, ASX benefits from the underlying growth in the size of the industry.
- Finally, ASX is also looking to leverage its expertise, brand and independence to further grow its business into new areas:
 - Technical services, data analytics, DLT and our investment in Sympli are examples of this.

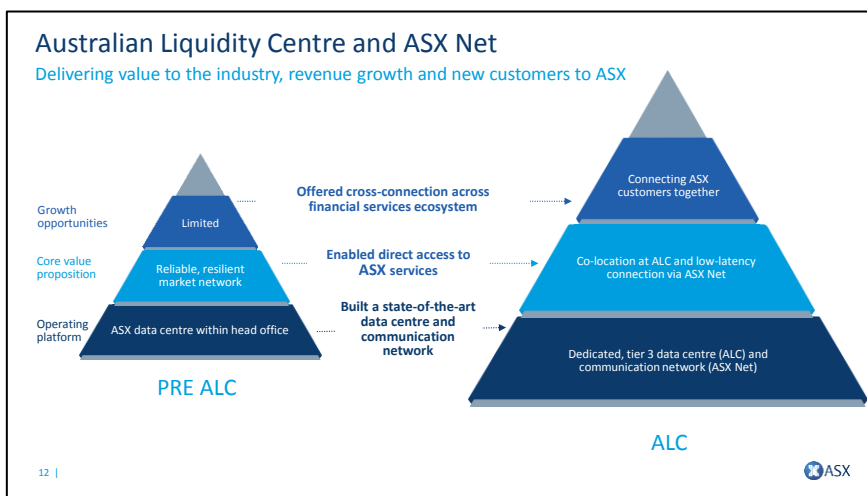
So, to bring this last point to life, I thought I would take you through examples of how this works – by looking at the past and the present to show where we think this takes us in the future.



To begin, let's go back to 2012 and ASX's decision to upgrade its data centre to a state-of-the-art facility at Gore Hill - what we now know as the Australian Liquidity Centre, or ALC.

Back then, ASX could have gone down any one of three paths:

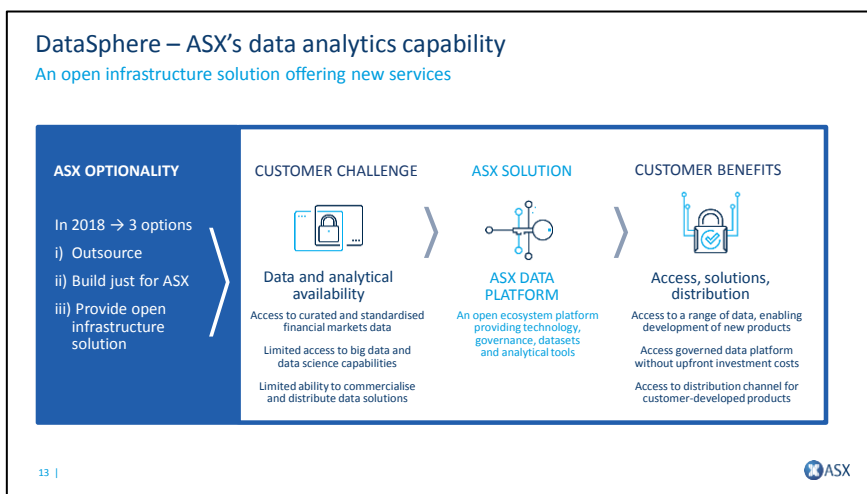
1. Like some other exchanges around the world, we could have outsourced our data centre to a third party. After all, we are a financial services company, not a technology company
2. We could have built a data centre that serviced ASX and its co-location clients who were seeking low latency connections. That would have been a logical low-risk option that focused only on how customers connect to ASX
3. Or we could have concluded that many in the financial services sector, including ASX, needed a high-grade data centre facility and the ability to efficiently connect to other financial market participants. So, if ASX created a more extensive facility that not only served ASX's needs but customers' needs too, then ASX may be able to provide new technical services to those customers.



ASX took the third option and in doing so made a significant investment in strengthening the technology foundations of the exchange – and of the Australian marketplace. We also grew our core value proposition by providing better connectivity for customers to the equity and derivatives markets. In addition, we added new services such as hosting our customers’ technology and communication services, and cross-connecting customers to each other for purposes that may have nothing to do with executing on ASX markets.

This has enabled ASX to expand its offering to existing customers, help bring down their total cost of ownership of technical services, and attract new customers. This has been achieved by thinking about ‘open’ infrastructure solutions that address our customers’ needs, not just our own.

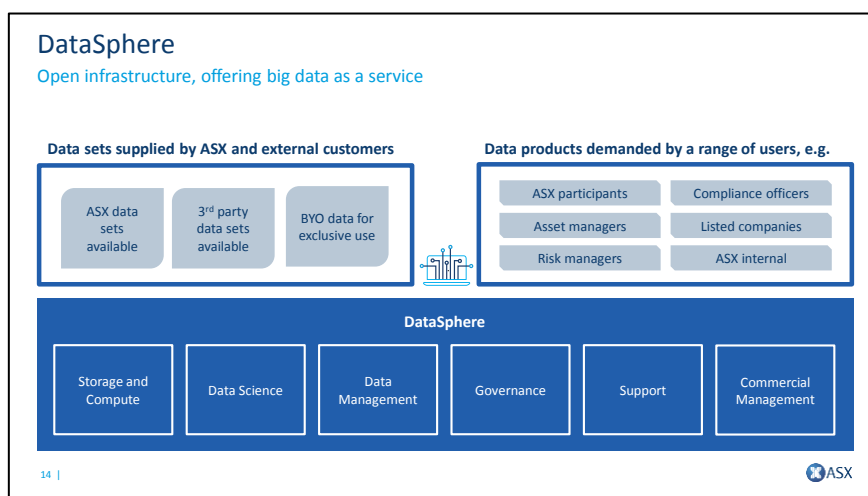
If we look back at that strategy, it has seen impressive growth over the last five years.



Fast forward to 2018 and we see a similar opportunity. ASX was looking to invest in a ‘big data’ capability to enable it to understand its business better and look at possible AI opportunities.

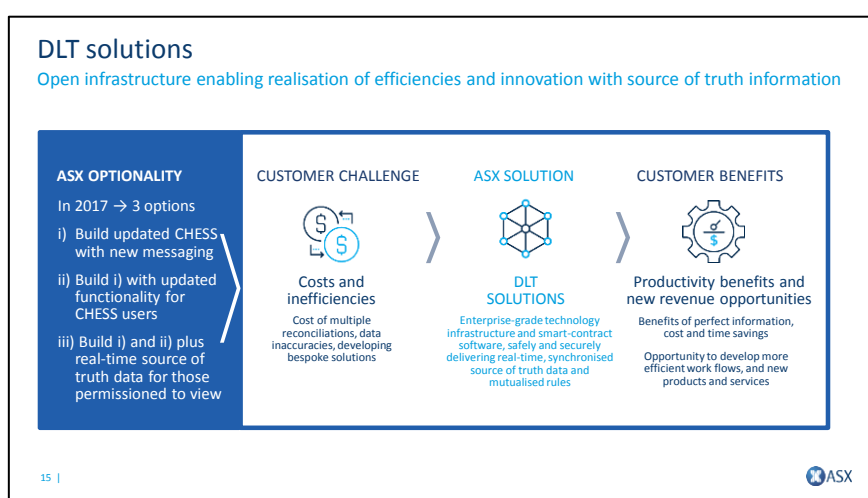
Again, ASX could have gone down three paths:

1. We could have outsourced the data analytics capability to a third party
2. We could have built a data analytics capability that just serviced our own needs
3. Or we could take the view that many others in the financial services sector also needed data analytics and if ASX created a more extensive facility we may be able to efficiently provide data analytical services to those customers.



This is what we have done. We have not just built a data analytics system to serve ASX, we have created a service that allows others to access ASX data, third party data ASX has procured, and to bring their own data into a workspace that they control. Our customers can then purchase analytics provided by ASX or third parties, programming languages, compute power and storage at a marginal cost and much more easily than trying to build that capability themselves.

As I said earlier, this new data analytics capability is up and running internally and we expect to open it to external users before the end of the financial year. This open infrastructure solution allows our customers to experiment and test their hypotheses on a marginal cost basis, and we hope it will add value to them across many asset classes.



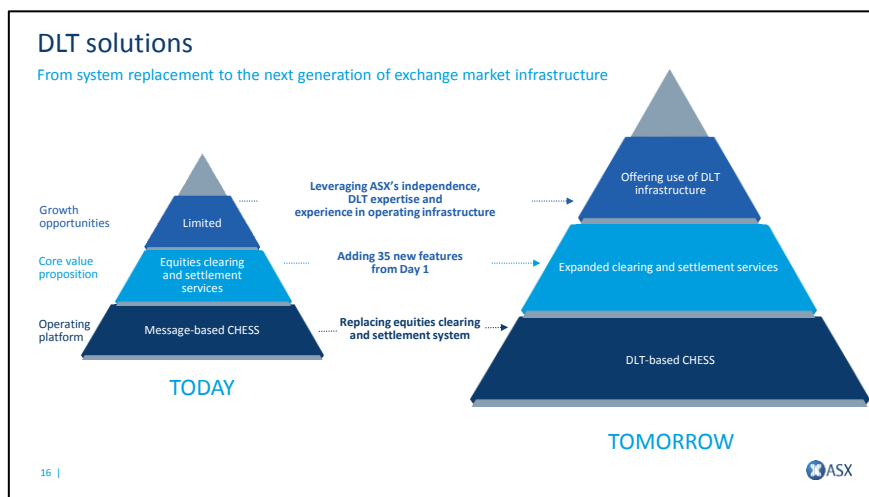
Fast forward again, this time to 2021, and ASX's replacement of the CHES system.

Once more, ASX has taken the view to create a solution that is an open technology, which allows access to more stakeholders to enable them to create new products and services, and to improve efficiencies, and lower risk and costs.

This time, ASX:

1. Could have just built a new system with a contemporary messaging protocol that replaced the legacy technology to provide the same clearing and settlement services as we do today
2. We could have consulted with our customers and just focused on updating and improving the services provided to those that use CHES
3. Instead, we chose to build an open infrastructure solution that not only does both of the things I just mentioned, but also provides, as an option, the source of truth in real-time to those who are entitled to view it. We believe, as do others, that this information and functionality will enable the industry to become significantly more efficient and innovative.

ASX believes that the customer benefits from the new system will be significant. And the project is in line with ASX's growth strategy discussed earlier.



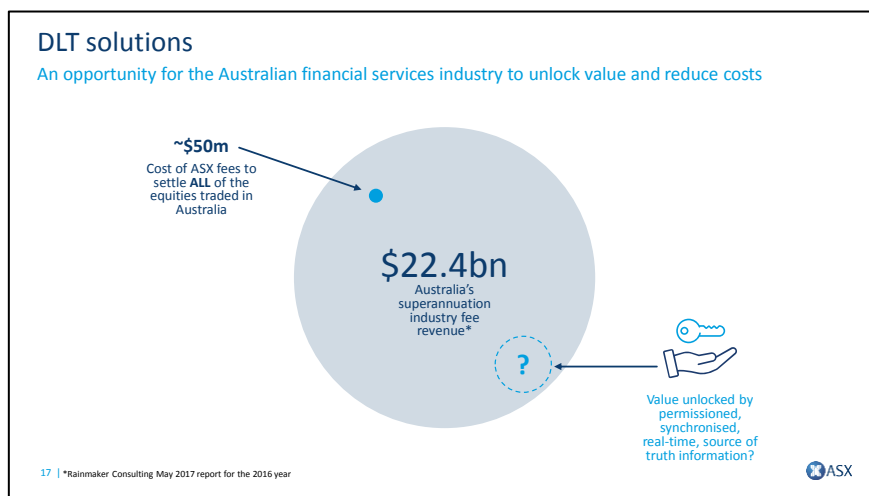
That is, as you can see on the diagram, today:

- We have a message-based CHES system, which allows equity clearing and settlement services. Growth opportunities are limited. mFund has been a way by which ASX has expanded its core proposition in this space and there have been other improvements such as t+5 to t+3 to t+2 as well. However, with a system that is now over 20 years old, the ability to add new functionality becomes more and more constrained
- In the future, a DLT-based CHES system gives ASX and the marketplace an improved underlying foundation that has the ability to provide significant efficiencies. This represents a chance for Australia to 'leap forward' - much like we did when CHES was implemented in the 1990s. This should not be underestimated. The dollar benefit delivered by the innovation that was CHES would be enormous
- Remembering that customers have a choice to make use of the DLT functionality or not, they will still be able to enjoy the enhancements to the core customer proposition of:
 - A new application running on new hardware with added security
 - Global standard messaging (ISO 20022) and
 - An expansion of ASX's core competency, with 35 new features on day one - these are features that customers have asked for through the extensive consultation process.

So what are the features of the distributed ledger functionality?

- Real-time data
- The data is verifiably source of truth
- There is secure permissioned access to that data
- And there is an ability for users on the system to connect to each other and add value without even involving ASX.

Why is this important?



Because, the cost of the \$2.7 trillion super system is currently around \$22 billion per annum. If we include non-super investments, the number is significantly higher.

The system is focused on the management of equity exposure, not only in asset allocation but also in turnover. So let's just concentrate on that, acknowledging that the benefits increase as we apply the same thinking to other asset classes such as fixed income.

The annual cost to the system from the pure settlement of Australian equities, via ASX, is about \$50 million dollars. The ability to disseminate this information more efficiently throughout the industry is a significant key to future productivity gains.

Providing real-time source of truth information securely to those who are entitled to see it, coupled with an ability for a customer, or customers, to build business logic directly onto this source of truth (via a smart contracting language), will make the industry more efficient.

Logic tells us – of course it will. The real question is: how much value can this add?

Is it 1%, 5% or even more?

I would suggest that it is quite a low bar to expect that fully implemented, a DLT system would give the industry a mere 1% value benefit.

However, even at 1%, the benefit to the industry is four times more than ASX reducing its settlement fees to zero.

Importantly, when I talk of a 1% benefit, I don't just mean a 1% reduction in cost. I imagine that this infrastructure will create value by providing a platform for better products and services for the next decade or more, in addition to lowering risks and costs.

This is why I say that as an industry we should focus on this opportunity so we can understand and capture the benefits of an open infrastructure of equities settlement information.

And this is before we think about making the lives of our customers even easier by having debt securities held on a similar platform, such that customers can see all their holdings on the one system with perfect trust and in real-time.

Summary

On-track for FY19 and beyond

- > On-track to meet expense and capital expenditure guidance for FY19
- > Progressing major projects in-line with management expectations
- > Expect Sympli to complete first financial transaction by end of FY19
- > Continuing to develop open infrastructure solutions that help customers create new products and services, improve operational efficiency, and reduce risks and costs

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As you can see, FY2019 has been a busy year of achievement for ASX, and we see FY2020 shaping in a similar way. So with that, I will close with a quick summary:

- ASX is on-track to meet expense and capital expenditure guidance for FY2019
- We are progressing major projects, and progress is in-line with management expectations
- We expect Sympli to complete its first financial transaction by the end of FY2019
- And we are continuing to develop open infrastructure solutions that help customers create new products and services, improve operational efficiency, and reduce risks and costs.

Thank you. I am happy to take questions.



Questions &
Discussion