

From translation to transformation: future challenges and lessons learnt for ABS Blaise online survey program

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1. Abstract

In 2015, the ABS finished a challenging program of migrating data collection activities to online surveys as the primary option for most of its collections. This “Translation” program began rolling out in December 2012 to create new online mode for both household and business surveys, implemented on existing infrastructure. The ABS is now planning for further transformation, with the Acquire capability program due to begin this year. Acquire@ABS will contribute to the ABS transformation goals to modernise and harmonise enterprise wide services, and develop capabilities which will enable the transformation of ABS data collection, acquisition processes and systems. The project aligns with the transformation principles by creating robust, usable and contemporary products and services for providers, external clients and internal clients.

This paper presents work in two parts. Firstly a review of the translation program with successes and lessons learnt as well as recent initiatives beyond migration, including generating Blaise instruments on DDI and utilising the ABS address coder in online forms with an embedded address validation tool. Secondly, looking forward to future online capability, as part of the planned transformation program, Acquire@ABS, and the opportunities and efficiencies sought through improved self response on new digital channels.

2. Background

The ABS is Australia’s national statistical agency. By providing trusted statistics and statistical leadership, the ABS supports public debate and helps Australians to make informed decisions in an increasingly complex world. The ABS provides statistics on a wide range of economic, social, population and environmental matters for government, business and the community. The ABS continues to be regarded as a world leader amongst national statistical agencies. However, the ABS faces a number of challenges, to:

- ensure that high quality official statistics are readily available to governments and the community in time for key decisions to be made about the future
- reduce the cost and time of doing business
- provide open data to users from a range of sources through the provision of modernised statistical products and services.
- reengineer the way we collect data and replace our ageing statistical information management infrastructure.

In response to these challenges, the ABS embarked on a significant journey of change – the ABS 2017 Program, which aims to transform the way we collect, manage and deliver information and statistics. This work started in 2011, and the data collection project is now referred to as the Acquire@ABS project. This project is now one of the 19 identified capability projects under the ABS Critical Statistical Infrastructure Program. The project will develop enterprise capabilities for the data acquisition business model and transformed statistical business lines.

Without this change, our ability to achieve our mission into the future is at risk; we will not be able to continue to fund our existing work program, nor respond effectively to the changing needs of our users. The ABS has applied to government for funding, and in preparation, the ABS has commenced planning for the transformation process.

The ABS began transforming data collection activities to online surveys as the primary mode of collection in 2012; the most significant change to survey collection in the ABS since the introduction of computer assisted interviewing in 2003 and the electronic scanning of paper forms. This was an ambitious and complex change, and many challenges were faced throughout the transition. Initial progress for this translation was presented to IBUC in 2013.

A phased approach was adopted to achieve organisational benefits without additional funding. The first phase “Translation” was established to initiate the ABS 2017 transformation. This stage developed on line survey forms, based directly on the paper forms, delivering essential infrastructure to enable online data collection, and integration with existing workload and collection management systems. This 2 year initial phase, conducted during the 2012-13 and 2013-14 financial years, is now completed, and work is underway to map out requirements for the “Transformation” phase.

Phase 1 outcomes have been met and overall achievements include:

- Cost savings realised for DACB and the ABS with data acquisition and collection
- Delivery of online surveys for a significant amount of business and household collections
- Improved processes applied throughout data acquisition and collection activities for both household and business collections
- Providing an electronic interaction mode for data providers
- Meeting whole of government requirement to reduce provider burden and increase electronic interaction with the public
- Delivery of a digital Census test
- Facilitating and adopting a collaborative approach to change management throughout the ABS.

3. Current Blaise web program

In 2012, Blaise IS was assessed as a suitable platform for current and future survey collection requirements, offering a ready-made solution that would integrate well with existing survey collections. This solution needed to be available for deployment for the MPS from the December 2012 cycle. The ABS has since implemented online forms for the majority of business collections and the Monthly Population Survey (MPS), completing the first phase of the ABS data collection transformation, with:

- upwards of 90% being collected via web for Main Economic Indicator (MEI) quarterly business surveys
- self-reporting take-up for on average 22% of MPS sample.

Business surveys enjoy a high take up rate as these collections were always self enumerated, and the providers were demanding online capture capability. Take up rates for the MPS online form is much lower. Household surveys traditionally involve interviewer modes of data collection including obtaining data directly by way of telephone interview (TI) or face to face (F2F) interviews.

3.1. Business online form progress

Business respondents initial take up for online surveys were extremely good, and the rates are still, in general, increasing over time. This is primarily due to meeting provider expectations to have a digital channel. The transition has been very successful for most surveys, especially for the straightforward self enumerated paper form. Collections of these types were a 1-1 map into a Blaise online form. When surveys had a more complicated path the translation into an online instrument and acceptance

by providers was less successful. For example, the Blaise Computer Assisted Telephone Interviewing (CATI) instrument is deemed more appropriate for the Job Vacancies Survey for internal collection, than a respondent logging on to an online form. Providers associated with Agricultural surveys (traditionally long with complex response categories) have been found to be less likely to convert to online form collection, although take up rates for Agricultural surveys has improved from 2013 to 2014.

3.1.1 Operational benefits

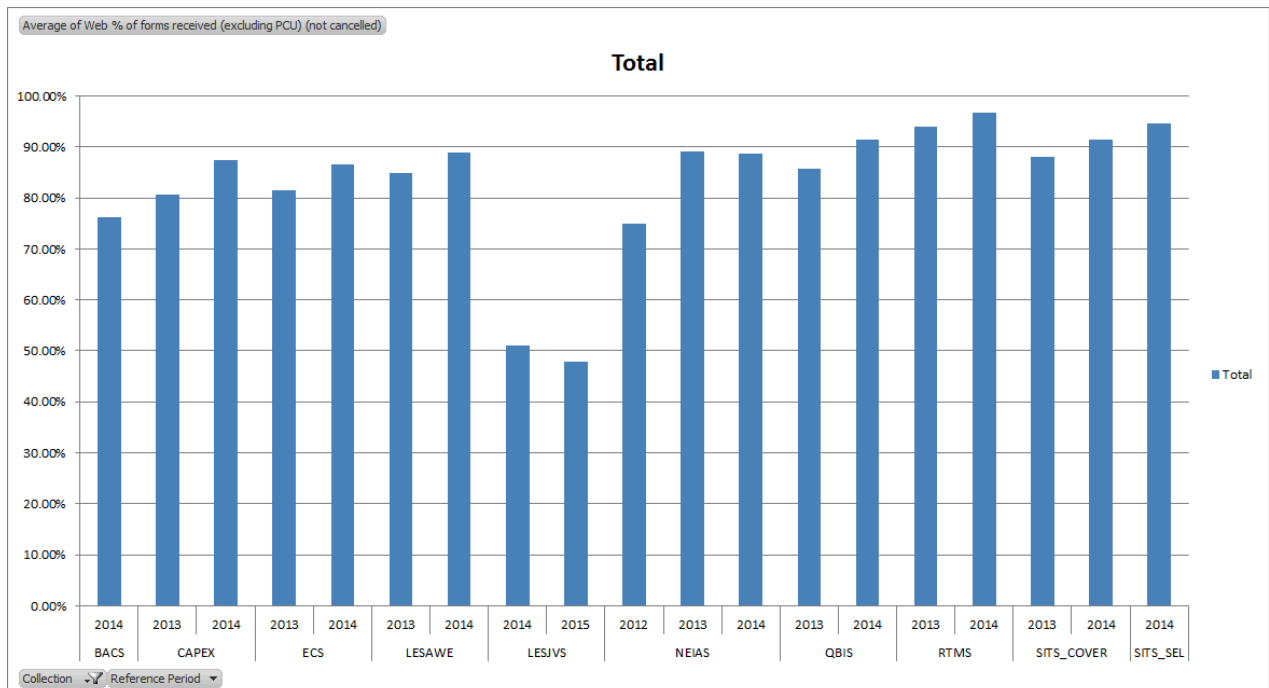
The operational benefits from transitioning the majority of business forms to online surveys are significant. The reduced number of paper forms despatched, with corresponding savings from less paper form data capture and processing, is predicted to save the ABS approximately 2.4 million per year.

However, additional operational costs have been incurred, with significant support required in relation to password resets (including forgotten passwords, logon difficulties, discarded log-in information). Work is currently underway to changing means of authentication to promote self managed passwords (more in section 5.3 below).

3.1.2 Business take up rates

The following table shows online form take up rates for a range of business collections from December 2012 through to March 2015.

ABS quarterly Business Surveys - Average percent by year

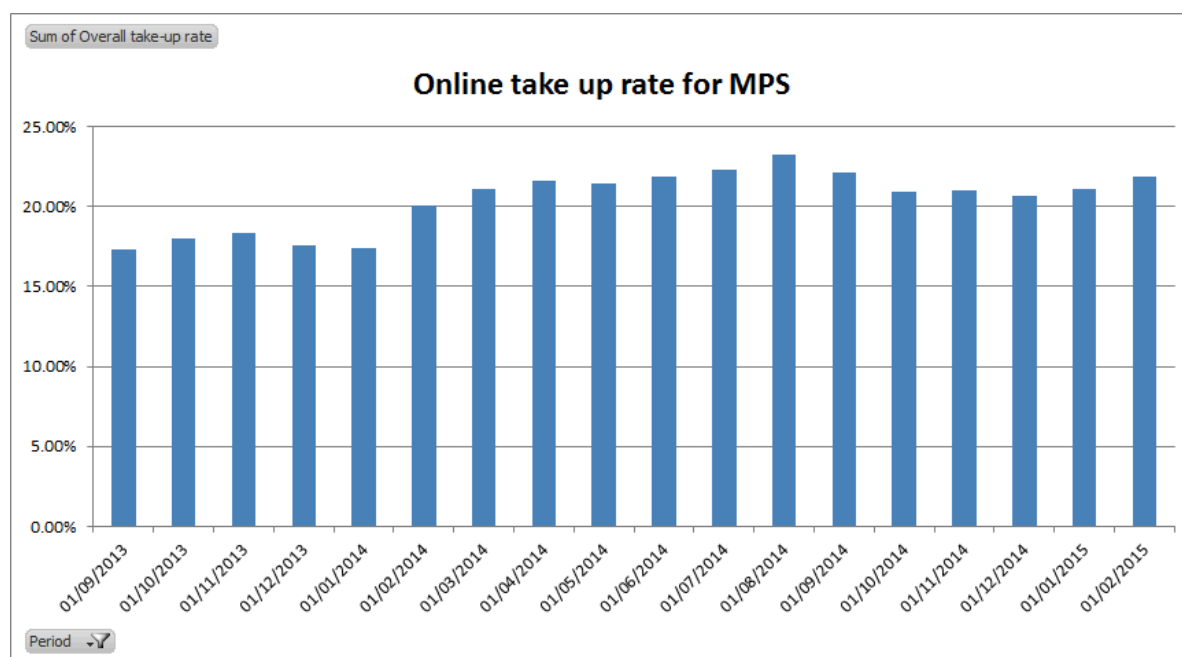


3.2. Household online form progress

The Blaise household contact detail form was introduced in 2012 to reduce interviewer travel costs when attempting to make contact with a dwelling. This solution was implemented using a simple Blaise online form, to capture the preferred contact times and numbers for interviewers to call. This had moderate success due to minimal take up, but the operational gains from when it was used were significant.

The MPS moved to an online form in late 2012, with the initial web option only available to subsample of total MPS population before gradually increasing availability in mid 2013 to full sample. Take up rates have increased, hovering at about 21- 22%. The drop off rate for online form reporting has influenced these take up rates. It should be noted that an online form reporting option is re-offered in the fourth month of participation but was not promoted in earlier periods.

MPS online survey take up rates – December 2012 to February 2015



3.3. Online Census Form progress

Due to scalability requirements, the online census form is not using the current ABS Blaise environment. The ABS is reusing the eCollection solution from 2006 and 2011, as developed by IBM. The recent Census Major Test conducted in August 2014, had 57% of responding dwellings used the online option and the remainder used a paper form, a promising improvement on the 33% of Australian households who chose to complete the online survey during the 2011 Census of Population and Housing. This increase was driven by a combination of factors, including increasing use of the internet by Australians to interact with Government between 2011 and 2014. The online option was promoted as the preferred option in the approach letter sent to most households. Paper forms were primarily only sent out by request with a small proportion receiving them up front. This growth in take-up is encouraging and bodes well for the planned 65% online take up for 2016.

The online form developed for the 2014 Census Major Test were designed and built to be responsive. This is the first time the ABS has included responsive design for eCollection. Responsive design enables the form layout to adapt based on the screen size of the respondents device. Adjusting the layout improves the usability of the form and therefore the respondent's experience. As part of

meeting provider expectations, the ABS is including responsive design as key requirement for future household and business online surveys.

3.4. Usability and design

The current platform has been designed for desktop computer users, primarily for Internet Explorer browsers and Windows 7, which accounts for nearly 50% of respondents. The online forms are tested across a range of browsers to make sure behaviour is as expected, as variations can occur, mainly around screen layout of response boxes. The results for household and business collections are presented separately due to the differences in device usage. Respondents do use mobile devices (Android and iOS), however at present, ABS instruments are not optimised for said devices, which has led to some respondent dissatisfaction. The low numbers in the tables below reflect the difficulty of completing a form through handheld devices, not preferred respondent options. Improvements for responsive design are limited in our current solution and will be included with future Blaise developments or alternative platforms.

Business online survey responses by platform and operating system

Browser	Operating System							
	Android	iPad	iPhone	Mac	Windows	X Window	Other	Grand Total
Chrome	0.11%	0.04%	0.00%	0.68%	17.27%	0.04%	0.00%	18.15%
Firefox	0.01%	0.00%	0.00%	0.66%	8.87%	0.03%	0.00%	9.58%
Internet Explorer	0.00%	0.00%	0.00%	0.00%	66.43%	0.00%	0.01%	66.44%
Opera	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	0.02%
Safari	0.17%	1.63%	0.33%	3.23%	0.43%	0.00%	0.00%	5.79%
Other	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	0.03%
Grand Total	0.29%	1.67%	0.33%	4.58%	93.05%	0.07%	0.01%	100.00%

Household online survey responses by platform and operating system

Browser	Operating System							
	Android	iPad	iPhone	Mac	Windows	X Window	Other	Grand Total
Chrome	1.02%	0.22%	0.04%	2.21%	22.79%	0.04%	0.00%	26.30%
Firefox	0.14%	0.00%	0.00%	1.60%	12.57%	0.30%	0.00%	14.61%
Internet Explorer	0.00%	0.00%	0.00%	0.00%	37.38%	0.00%	0.07%	37.45%
Opera	0.00%	0.00%	0.00%	0.00%	0.05%	0.00%	0.00%	0.05%
Safari	1.00%	9.59%	2.22%	8.55%	0.09%	0.00%	0.00%	21.46%
Other	0.00%	0.00%	0.00%	0.00%	0.11%	0.02%	0.00%	0.13%
Grand Total	2.17%	9.81%	2.26%	12.35%	72.98%	0.36%	0.07%	100.00%

3.5. Online form accessibility

The ABS has recently undertaken a review on current Blaise online forms and the WCAG (Web Content Accessibility Guidelines) standards. This included how suited the forms are for those respondents with vision impairment, or who rely upon screen readers like JAWS or NVDA. While not fully compliant (at present due to limited resources), most issues identified within the current form design should be straightforward to resolve. For example, simple aspects like using alt attributes on images, or a consistency with marking up headings, and others around how Blaise has rendered in to HTML (eg. marking up table cells). The ABS is currently working on remedying these aspects but major changes will not be made until further transformation projects are undertaken.

4. Reviews to support Blaise online form implementation

The ABS largely self-funded the initial web migration program, with internal governance to oversee the program across the many stakeholder groups. Several key reviews were held while the translation projects were underway. This paper reports on key outcomes from the sprint workshops to improve efficiencies in operations, and the review of Blaise development process.

4.1. Sprint workshop outcomes

Workshops were held in business and household collection area stakeholders to develop strategies that were jointly agreed to be of strategic importance, outlining challenges and highlighting the need and the importance of working in partnership with stakeholders to achieve the best outcomes. In particular: the budget context of increased efficiency dividends and the need for productivity initiatives; the need to produce quality data and 'fit for purpose' statistics for our users; the ABS' outline of stronger accountability for financial management; and the ABS2017 goal of reducing cost and time of doing our business.

4.1.1 Reduced data collection costs

Significant savings have been realised through reduced printing and data capture costs with the introduction of online forms. While online forms are now the primary mode for most business surveys, follow up of these surveys rely on paper letters and telephone - both of which are expensive follow-up modes. An Email Reminders functionality was identified as a priority initiative for business surveys to deliver additional benefits. A new project was established to implement Electronic Reminder Application (ERA), and meet business survey respondent needs to interact with Government through electronic channels.

This is a larger scale development project than households, due to the size of the ongoing business program. The ERA work has established an architectural design, new business processes, and communication strategy for optimising the outcomes from the digital channel. Pilot tests across the business respondents have been positive, with a general result that those selected for email reminders had a much higher rate of completing survey, and those who provide emails in online form contact details are more likely to complete the survey in the next collection cycle. The functionality is due to be released into production by end June 2015.

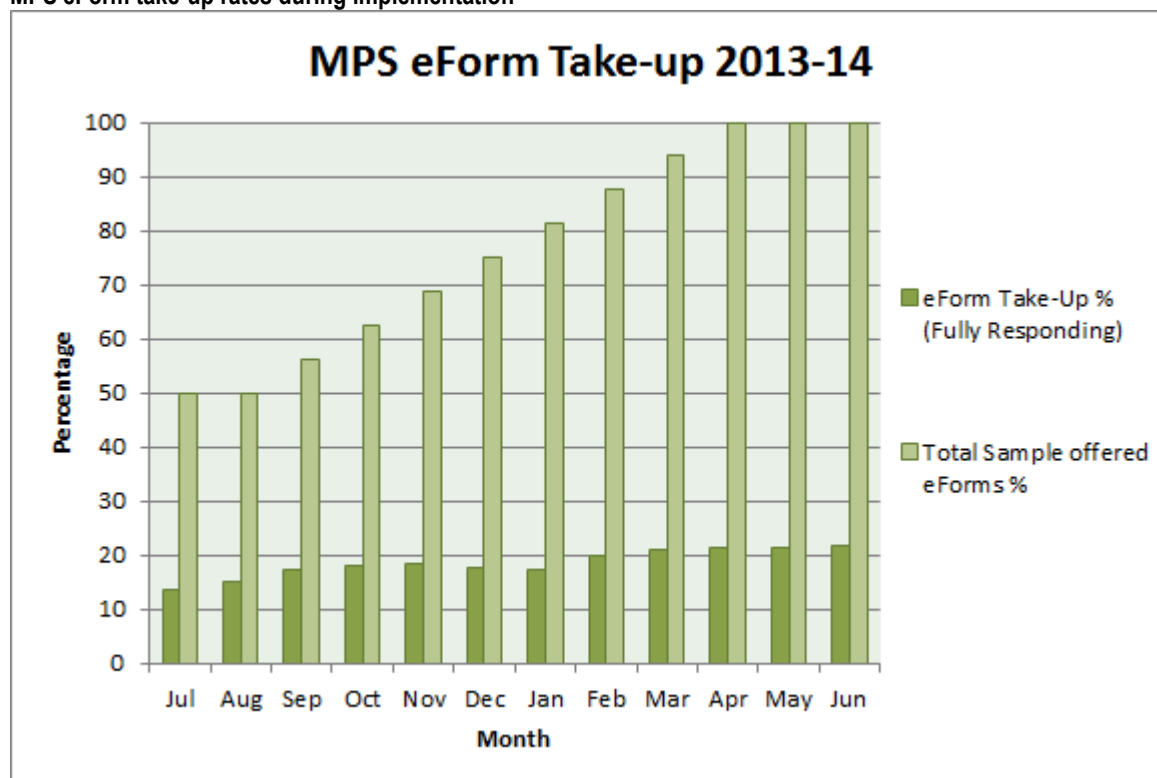
4.1.2 Improved online form take-up

Clearer and more focused approach and reminder letters have been created for business and household surveys. The new letters are designed to improve the take-up of online form and the call to action to providers. A3 fold-out colour brochure, referred to as the Guide, created for household pre-approach information, including MPS. These initiatives saw an improved take up of 3-5% to the online form.

Strategy changes were endorsed by senior Executive to strengthen the compulsion statement in correspondence, and for letters to be sent with the Australian Statistician's signature block. The new compulsion statements were tested in the Health dress rehearsal in November 2013 and went live in February 2014 for MPS enumeration, with another increase of 2% take up. Business surveys have also implemented this change from the December 2013 quarter. The compulsion statements clearly state that respondents are obliged to provide data to the ABS.

In addition, all MPS online enumeration was shifted into week 1, to improve the follow-up process, providing particular benefit to the enumeration of supplementary surveys. This was also implemented in February 2014, and adds to the take up rates displayed in the table below.

MPS eForm take-up rates during implementation



4.2. Blaise development review

The ABS held a review in early 2014, after the majority of online forms were implemented, to assess the impact from the new work on the statistical and development business lines. The project identified the changes introduced to the data collect processes, and the coordination necessary to allocate resources effectively and deliver the entire survey program efficiently.

4.2.1 Blaise review outcomes

The aims of the Blaise review were to:

1. improve the Blaise instrument development process by addressing practices leading to non-sustainable resource stretch, timeliness and quality issues
2. identify, prioritise and address issues leading to immediate improvements and relieving pressures experienced during development of collection instruments
3. integrate changes to the Blaise instrument development process and timing to accommodate multi-modal instrument design
4. standardise and streamline processes across business and household surveys to achieve efficiencies, improve quality and provide consistency for providers
5. provide best practice guidelines and standards in a consolidated process.

A period of consolidation for the last 6 months of the project gave opportunity to bed down the online form surveys. This opportunity was also used to review processes involved in survey instrument specification, development and testing with a view to identify and address pain points in the Blaise instrument development processes; implementing improvements to relieve identified pressures; standardising and streamlining processes across business and household surveys and accommodating multi modal instrument design.

4.2.2 Lessons learnt

Transforming data collection to online forms, while delivering on collection operations, was a demanding undertaking that placed pressure on many areas of the ABS. Statistical areas were contributing to the development of the new online form stream while maintaining ongoing operations. Some strategic risks were realised during the project and required remediation, particularly from system instability and poor performance arising from legacy system integration. The additional complexity from the new channel addition has increased operations and administrative load, with significant impact on available resources.

The review was undertaken in close collaboration with household and business survey areas, the Blaise development team, and other key stakeholders, and identified the following key themes:

- A provider focus is required when developing transformed solutions
- The rapidly changing digital world imposes challenges (devices, platforms, online environment)
- Integration of new functionality (online data collection mode) with current legacy systems is complex and difficult.
- Don't underestimate complexity of delivering change across the organisation. Change management practices are as essential as sound project management to deliver quality outcomes for large projects.
- Support across ABS from senior Executives was important. Many challenges were faced in transition.
- Benefits realisation plan to be developed at project outset and allow for impact of transition (including how benefits will be measured).
- Need to resource implementation, including for SMAs to adopt and implement change. Process improvements are essential to support system changes to achieve effective outcomes.
- Future change solutions to meet enterprise capability requirements.
- Development work to be done in separate stream to business lines, good engagement essential for good outcomes.

Changes to survey program management from the Blaise review are underway, with benefits realised almost immediately through improved communication and collaboration between stakeholders. Experience gained through the initial migration process has led to improved timetabling and resource estimation for upcoming developments. Standardisation of the code base is being undertaken by the Blaise team. Overall, ABS online survey deployment capability has improved, demonstrated by better quality instruments and lower overall costs (i.e. development, testing and corrections).

The next phase of Acquire will move from operational delivery of working web form capability to providing the enterprise capabilities for data acquisition to support reengineered statistical programs and data acquisition business model. That data collection is going first reflects the priority to replace the aging infrastructure currently supporting the Blaise web platform. The online survey infrastructure in place now was retrofitted to the existing paper/interviewer based systems and the operational areas have worn the costs of this, mostly with additional human intervention to manually support the modified processes.

5. Additional enhancements to online form environment

The ABS introduced additional improvements in the translation program that were beyond the scope of the original aim for replicating the paper questionnaire in an online format. These projects were introduced as capabilities to secure the infrastructure environment (as needed to manage risk from authentication errors) or externally funded to support specific survey goals, such as the metadata instrument generation for Agricultural surveys.

5.1. Generating a Blaise instrument with DDI

During 2013 the ABS developed a prototype metadata driven Blaise online form. This involved developing a Metadata Authoring Tool instrument design interface to capture the questionnaire specifications in DDI. The survey instrument specification would then be automatically transformed into Blaise code, forming the foundation of an online form.

The prototype was designed to use strategic ABS technologies, platforms and tools, including the Statistical Workflow Management (SWM) and the Metadata Registry and Repository (MRR), as well standards such as GSIM, GSBPM, and DDI to support automation of statistical business processes for online form production.

The project was successful in enabling automatic generation of Blaise online form code from a DDI instrument specification was achieved. Approximately 80% of Blaise online form code was automatically generated and used as the foundation for the 2013-14 Land Management Practices Survey (LAMPS) resulting in a reduction in development time from 10 days down to 2 days. Furthermore, the project also laid the foundation for developing the ABS DDI Instrument Profile based on the DDI sample that was produced for the LaMPS instrument. Finally, the project demonstrated the use of the Metadata Authoring Tool to define instrument specification in DDI in an efficient manner to enable potential streamlining and automation of online form development in the future.

5.2. Address validation tool

The address validation tool prototype was developed for the 2014 Agricultural collections, to improve address quality and geocoding outcomes. This was the first instance of embedding functionality within the Blaise form to target the respondent checking entered information, with intention of reducing downstream coding efforts.

The tool uses the ABS address validation to confirm the address and then captures the geocode information for the validated address from the ABS address coder. The level of geocode information written to Blaise can be specified to meet business needs. The first instance operated on a text basis, asking respondents to confirm an entered address against a known list of addresses presented to the user from an internal address register. The prototype investigations included map functionality, however the additional web calls were determined to be too heavy. Future development will consider how to reduce this to support user interaction from a graphical map interface, but may not progress until further transformation programs are initiated.

5.3. New authentication solution

The rapid transition to online enumeration exposed an increased risk of data disclosure, when providers called the contact centre for help to access their online form. The instability of the first authentication solution and the potential for human error in verifying the correct business did result in accidental disclosure of active online forms. The ABS has improved the verification process and is now implementing a new authentication solution, for use by end June 2015.

The new authentication solution, referred in house as XIAM (external identity access management) replaces the first solution, where the authentication process was embedded within the Blaise environment. The XIAM solution utilises off the shelf software for password management, to have respondents self-register and establish credentials for ongoing management of their access codes. This is an essential component, to give users the tools to self-manage passwords, and reduce the number of incoming calls to the contact centre requesting a password reset.

The XIAM solution will be the new corporate capability for registration. The environment has benefits for supporting online collection, especially for managing upcoming selections for respondents as sets of obligations, i.e.: only one access point required for all 8 months of the MPS. Additionally, the new environment allows for use of multiple server parks, giving more flexibility for introducing updated Blaise versions, and supporting different online collection platforms. The solution should be readily extendible to meet Whole-of-Government alignment with the ‘one government’ access portal, such as ‘MyGov’ and ‘Auskey’.

Considerable care was taken in the design of the overall solution, as the user navigates through three distinct systems. The initial log in screens, registration pages and survey obligation pages were designed to have a consistent look and feel, and make it easy for respondents to use. The increased registration time is being assessed to minimise impact on household respondents particularly. Initial testing is positive, at time of writing the ABS were preparing for a large scale pilot test (1000+ sample) across household respondents. The key measure of success for the June go-live date will be reduced number of calls through to the call centre to reset passwords.

5.4. Additional research projects

The ABS is progressing additional research projects to improve provider experience and encourage self-reporting. These enhancements focus on increasing the household online survey responses for the MPS, where small conversion rates give large benefits through reduced field costs.

5.4.1 Online conversion

MPS survey is conducted monthly over a 8 month period. Currently, interviewers attempt to convert respondents into online reporting in the first and fourth month of data collection. Proposed procedural changes are underway to attempt conversion in consecutive months from CATI/CAPI to CAWI in the first to fifth months and offering the online survey every month via letter and email to all respondents that have completed an online form. These procedures aim to shift providers to use online forms and further increase the take up rates.

5.4.2 Making online entry visible

The providers are sent a letter with a shortened URL to go directly to the log in screen. However it was noted in testing that providers may search on the website or through browser search engines for the log in screen. To accommodate for this, the ABS website now displays a ‘complete your survey’ button which enables respondents’ direct access to log into their survey obligation.

5.4.3 Form redesign

The Blaise household contact detail form was introduced in 2012 to reduce interviewer travel costs when attempting to make contact with a dwelling. This form will be redesigned to increase a positive experience for the respondent. Respondents can mistake this form as the actual survey form and be disgruntled when they realise they have to complete another form. The Blaise household contact form will maintain its autonomy by presenting the online form as one page without ‘next/back’ buttons. The redesign aims to present it as a page for information which is separate to the survey form.

6. The journey to transformation

The future transformation of online survey forms is part of the Acquire@ABS project, the first of nineteen Enterprise Wide Capability Projects to be delivered under the ABS transformation program CSIP (Critical Statistical Infrastructure Program). CSIP seeks to ensure a sustainable future for the ABS. The program will implement large scale innovation by standardising and industrialising ABS business capabilities and driving these automatically through the use of end-to-end metadata. This will require the re-engineering of a large number (if not all) statistical business services. For this to be achieved, a number of CSIP projects will be initiated where requirements will be gathered, services built, bought or wrapped (whereby existing services will be incorporated into new environment) and business activities integrated with the new foundational infrastructure.

6.1. Building capability

Acquire@ABS is an enabling project that will transform our data acquisition capabilities through harmonised enterprise wide services which will enable the transformation of ABS data collection, acquisition processes and systems. The project aligns with the ABS 2017 principles by creating robust, usable and contemporary products and services for providers, external clients and internal clients.

6.1.1 Aims for Acquire project

The Acquire@ABS project aims to integrated enterprise wide solutions to transform the way we collect, manage and deliver information, and is tightly aligned with three ABS Strategic Directions:

- Transformation of the management of statistical information to improve usability, value and timeliness
- Meet provider expectations through greater coordination of information collected for statistical purposes and through investment in e-collection and other alternative data sources
- Ensuring long term sustainability by developing scenarios that maximise the effective and efficient use of our resources.

6.1.2 Enterprise solutions

The ABS aims to move from line of business infrastructure to enterprise infrastructure, which is able to meet the highest priority needs of most areas. Both the Acquire@ABS and Census programs will be responsible for enterprise infrastructure development for the collection of data over the next few years, with the aim that for 2021 the collect environment will have capability to support both the complexity of the ongoing survey program and the magnitude of the population census.

As discussed, to date the ABS has focused on implementing online survey capability for the Monthly Population Survey, most business surveys and preparation of an online solution for the Census in August 2016. Due to issues of scale, the Census solution is not being considered on Blaise for the 2016 cycle. However many components in development for the 2016 Census infrastructure can support ongoing online collection.

The enterprise solutions will provide the infrastructure to support the new transformed business processes, and use enterprise architecture through the following principles:

- Enterprise infrastructure such as the MRR should underpin new developments, and all systems at a minimum need to be metadata driven.
- A common look and feel should also be maintained where possible and appropriate.
- Where practical solutions will be developed following Service Oriented Architecture/ Modular design (plug and play) principles to maximise reuse and reduce ongoing support.
- Leverage for future corporate solutions. What is underway from 2016 Census solutions. Online Census tool externally built and hosted application not built for future survey program

re-use. Investigating expanding application solution now to extend re-usability. Note 2011 ACES solution had similar basis and not supported for future viable solution.

6.1.3 Future business needs

Online instrument capability is a core part of all future collection strategies. Data collection will be primarily self-reporting, through digital channels. The future pathway for reengineered population statistics is for a new household survey, the Australian Population Survey (APS), to integrate previously disparate survey data collection into a single, integrated, continuous modular vehicle. This will enable increased efficiency, responsive agility, statistical utility and data coherence.

Business data transformation has a similar emphasis on coherence, to align collected data with administrative data and minimise reporting burden. Central to this is an expanded and outwardly facing Business Register, and unlocking the potential of administrative and transactional data. Whole of government business engagement initiatives will be supported, including use of AusKey for survey authentication, ability to access ABS surveys through “business.gov.au” and prefilling forms with Standard Business Reporting data already collected by other agencies.

Blaise remains in consideration as a part of this strategy however where it fits is dependent of how Blaise 5 will work with the desired outcomes: a flexible and adaptable environment enabling a more responsive statistical system.

6.2. Plans for future data collection

Acquire@ABS has evolved over time to meet the challenges presented to deliver a web collection capability and infrastructure that is convenient to providers and respondents. Through Acquire@ABS, data collection will transform to enable business areas to modernise processes, with systems which are easy to use and reliable for internal and external stakeholders. Acquire@ABS will create a contemporary environment for collection and communication with our providers, clients and workforce.

This transformation will support the collection or acquisition of data via a range of capabilities and activities. This includes statistical data requests which enable data providers to be notified of their need to provide data to the ABS. This capability includes the construction of data collection instruments to support different modes of collection (e.g. web queries, file transfer, self administered/other interview type, etc.), and notification using different channels (e.g. electronically, phone, physical mail). Key capabilities included in the project are:

- Instrument creation through metadata driven questionnaire design tool
- Multi-modal data capture and processes
- Clerical data capture
- Follow up of information from data providers and data collectors

This project enables the retrieval of statistical data from survey, census, or administrative data sources via a range of data channels including interviewing, web capture, scanning, file transfer and stream transfer. The ABS is aiming to have a build once use many approach, where instruments are specified once and instances for modes generated via metadata driven process to support dynamic collection activities.

The ABS is currently investigating approaches to market to create this capability, as previous approaches have indicated large gaps in the currently available off the shelf products. This approach may consider multiple platforms for online capability, to support simple and complex questionnaire requirements. The ABS is engaging with other NSOs to consider how international collaboration may provide benefits with a market solution. In addition, the ABS is considering how to best leverage current capabilities to meet future needs, as discussed in section 6.1.2 above.

6.3. Provider experience

The ABS collects data under the Census and Statistics Act, which obliges respondents to provide data as requested and protects the confidentiality of the entity providing that information. This assists the ABS to maintain a high level of compliance, achieved through extensive face to face and intensive follow up (IFU) telephone procedures. Engaged providers give data more willingly and need less ABS follow up requests. Future collection operations seek to benefit from higher self-response.

In simple terms the ABS of the future aims for engagement that supports self-reporting needs, ie: simple, fast and secure, such that our providers will say:

- “I trust the ABS to look after the information I give them, and understand why they need it.”
- “It is easy to report my data to the ABS when I am asked.”
- “The ABS values my time and respects my needs. I feel my efforts are appreciated.”.

While the ABS has made strong progress to date in building on-line capability, the quick wins for improving response are nearly exhausted. There are good opportunities for managing provider reporting. However, aging infrastructure will not support increasing on-line reporting and severely limits future engagement options. The ABS 2017 transformation program aims to:

- implement provider-centric systems, to support tailored interactions and improve the provider experience
- build capability for responsive design, starting with collecting information on provider behaviours and preferences
- consider marketing and commercial approaches, such as CRM systems (Customer Relationship Management platforms), to track, record, store, and then data mine the information in a way that increases customer relations
- use provider intelligence for identifying non-compliance clusters
- build potential for future profiling of big data, individualising collection approaches and offering omnibus surveys for households and businesses.

6.4. International collaboration

The ABS is actively working with other National Statistical Organisations, to identify collaboration opportunities to support transformed collection infrastructure. This engagement includes working with Statistics Netherlands to progress priorities for Blaise 5 to support the digital by design, multi-modal collection approach outlined above. Considerations include how to assist the development program through shared resources, testing environments, performance and load capacities.

7. Summary

The ABS has completed the translation work through provision of online surveys for the majority of business collections, the Monthly Population Survey and provision of an online form for the Census Major test in August 2014. The ABS introduced several review points to improve the operational management of the new processes and increase uptake of online forms by examining and improving pre-approach and follow up strategies for households and businesses.

The ABS is now preparing for transformation, while waiting for a funding decision from Government. The transformation will revolutionise how the ABS work, standardising and industrialising business capabilities and driving these automatically through the use of end-to-end metadata. For data collection, this will build on the gains already made through the translation project. The new environment will be provider-focused, to make it easy for self-reporting, with online collection the primary mode. This capability needed is to support the new digital channel, with metadata driven questionnaire tools, online smart form functionality to reduce downstream editing, responsive design to support mobile devices and systems that are tuneable for the complexity and scale necessary to support the diverse collection program of a National Statistical Agency.

8. References

ABS Annual Report, 2013-14 (Cat no. 1001.0)

[1001.0 - Australian Bureau of Statistics -- Annual Report, 2013-14](#)

ABS Corporate Plan , Jul 2012 (Cat no. 1005.0)

[1005.0 - ABS Corporate Plan, Jul 2012](#)

ABS Forward Work Program 2012-13 to 2015-16 (Cat no. 1006.0)

[1006.0 - Forward Work Program, 2013-14 to 2017-18](#)

IBUC 2015 technical paper: Technical Improvements and future directions for eCollection and multimodal data capture in the ABS

MSIS 2014 paper: Statistical metadata driven eForms [Link to paper](#)

IBUC 2013 paper: Challenges of migrating ABS business and household surveys to Blaise web on a large scale and in a short timeframe [Link to paper](#)