



A credit management solution for the tertiary education sector

Universities Admissions Centre

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Executive summary

The tertiary education sector is facing significant disruption. Changes are afoot to respond to industry and learner demand for shorter-form credentials, including micro-credentials, and lifelong learning. The 2018 Review of the Australian Qualifications Framework (AQF) is exploring priority topics including standardisation of academic credit and shorter-form credentials to better meet the future needs of students, the sector and industry. Sector trends are leading to people actively designing their education and professional development throughout their career, relying on prior learning to build their individual pathway. It is estimated one in three university students currently seek credit for prior learning, either before admission or once enrolled, yet credit management is ineffectively executed by most universities. Students face inconsistent credit terminology and assessment decisions. They experience obstacles such as complicated websites, manual processes and delays in receiving outcomes. For most university leaders, their credit management processes are invisible, obscured by fragmented processes, basic systems and an overreliance on individual assessment. Credit management is overdue for significant improvement and a sector streamlined approach is necessary to meet future demand. The Universities Admissions Centre (UAC) is currently developing a credit management solution that will include a platform to manage a centralised searchable database of credit transfer for all Australian vocational education and training (VET) and higher education providers and a streamlined credit management service for universities. UAC engaged Nous Group (Nous) to consult with ten Australian tertiary education providers to understand the potential value of a UAC-delivered national credit management solution.

The current credit management landscape is uneven – with a variety of demand drivers and breadth of strategic emphasis across institutions. All universities report that international student applications are a driver of demand for credit assessments however drivers of demand from domestic student cohorts vary between Group of Eight (Go8) and non-Go8 universities. Non-Go8 universities typically noted a greater demand from prospective undergraduate students, with more students applying from VET and other sub-bachelor courses.

Most universities describe credit management as a significant pain point which continually features among the top student-related problems they would like to solve. There is widely acknowledged inconsistency of decisions due to complicated assessment processes and little emphasis on effectively utilising precedents. Time inefficiency impacts on student experience and leads to lost conversions. In most cases it is not possible to track and report on: workflow, pipeline and needs of students, success outcomes for students applying through articulation agreements. There is no standardised terminology across the sector which can cause confusion for students in their decision making and navigation of the system. Current processes to collect all required data to inform decisions place a significant burden on the student to upload correct course outlines and on administrative staff to validate or follow up when this information is not correctly provided, introducing time delays in assessment outcomes.

Analysis from a small sample participating universities estimates that credit management services currently cost universities between an estimated \$36.5 million annually, approximately \$125 per credit application.

UAC's credit management solution will support universities to use credit management strategically, to inform recruitment, retention and curriculum design decisions. It will empower students to make more informed educational choices and improve educational quality through greater transparency across the sector. It will provide a rich data source for institutions that will fill key business intelligence gaps and lead to a reduction in credit management costs for many universities.

This paper explores current approaches to credit management and sets out the value of a UAC-delivered national credit management solution.

1 Background

UAC commissioned Nous to scope the opportunity for a UAC-delivered national credit management solution. Nous' engagement involved collection of both quantitative and qualitative data from a sample of ten universities and TAFE NSW to inform the scoping, analysis and sizing of the opportunity.

This section describes the credit management policy context, the business opportunity identified by UAC, and the scope for this business case.

Australia has an integrated education system supported by the AQF - a national policy to regulate qualifications across schools, VET and higher education. The AQF Qualifications Pathways Policy, established in 2011, provides a policy basis for credit arrangements between and within institutions, with the intent to support students' lifelong learning. This Policy and the broader topic of credit pathways is one of the focus areas of the 2019 AQF Review. The Review is also considering other topics related to credit, such as: a wider range of credentials, including shorter form credentials; AQF taxonomies and levels, and recognising the value of VET and higher education; and volume of learning, and value of an AQF reference credit point system.

Recent research into credit pathways in VET and Higher Education (2018) identified that current credit management practices are variable and appear to be driven by provider preferences and characteristics, rather than the AQF Qualifications Pathways Policy. It also found that most learners are unaware of what credit they may be entitled to and how they would apply for it. The research suggests there is wide variety in the proportion of students requesting credit, ranging from 10 per cent to 60 per cent of enrolling students.¹ Individual institutions manage this type of service to students in different ways, including using different terminology in their policies available online, varied processes and approaches and service levels. Research conducted by Ithaca Group in 2018 found that credit practices are mostly guided by the requirements of either the Higher Education Standards Framework (HESF) or the Registered Training Organisation (RTO) standards, not the AQF Qualifications Pathway Policy.

UAC has identified the opportunity to develop and administer a credit management solution tailored for the Australian tertiary education context. It would include a searchable database of credit transfer for all Australian universities that can be used as a stand-alone site by prospective applicants as well a simple credit application process that integrates data into UAC's existing systems to enable credit granted to be confirmed at time of offer, streamlining the process for applicants and institutions. The aim of the solution is to provide a centralised and streamlined credit management service for individual institutions and a simple credit comparison service for applicants to compare credit across courses and institutions efficiently and transparently.

Initial consultation conducted by UAC with the NSW/ACT Heads of Student Administration and the NSW/ACT DVC (Academic) groups in 2018 demonstrated interest in this initiative. UAC has commenced development of the credit management platform including mapping and developing credit application and assessment workflows and developing a database of course outlines.

¹ Ithaca Group, Credit Pathways in VET and Higher Education Final Report, 2018.

2 Current credit landscape

Currently, there are no reliable sources of national data that can be used to understand the level of credit activity or the level of potential future demand. Using best estimates from available data sources², it is estimated there are more than 450,000 students annually applying for credit across and within Australian institutions. This is equivalent to one in every three students interacting with credit management services annually.

Recent research completed by the Ithaca Group suggests that 62 per cent of these applications are successful (i.e. credit is granted). However, the proportion of successful credit requests at individual institutions ranged from 10 to 100 per cent of credit applications.³ Research and analysis completed by Nous Group suggests an average success factor of 45 per cent.

This section describes the drivers of credit transfer applications across universities, current credit management practices and pain points related to current practices.

2.1 The current credit demand profile varies across universities

Whilst universities report consistent perceptions of student motivations for requesting credit, there are variations in credit demand profile across universities which impacts their credit management policies, practices and priorities.

Findings from the consultations conducted for this engagement highlight the five common student motivations for credit requests. Credit can be used as an intentional pathway usually with completion of a VET course to prepare for study at a university; change in study mode (moving from on-campus with one institution to online at another, or vice versa); to reduce the cost of their qualification; reduce the study load (and potentially duration) of their qualification; and to lessen repetition of learning. Reduced study load and duration is a common motivator across all student cohorts, with the exception of some international students where shortened study duration may impact success of post-study permanent residency applications. Cost is a more important motivator for international students and self-funded postgraduate domestic students, and usually plays a limited role in decision making for domestic students with access to Commonwealth supported places and FEE-HELP.

Consultations with universities found some variation in the demand profile across different types of universities. Go8 universities report that credit is mostly used to facilitate entry for targeted cohorts of students rather than as a lever to increase student numbers. Accordingly, Go8 universities typically see most credit demand from international and postgraduate students. Other universities noted a significantly greater demand for credit from prospective undergraduate students, with students applying from VET and other sub-bachelor courses. Another university provided the example of domestic undergraduate students seeking pathways into high demand and capped courses, such as commencing in a science course with the intent to transfer to an allied health course.

These findings complement the factors identified in the Ithaca Group report on Credit Pathways in VET and Higher Education (2018). This report identifies that the main factors driving institutions credit approaches are: serving a diverse student cohort (resulting in increased student numbers); responding to

² Drawing on Higher Education Information Management System (HEIMS) 2016 data, Ithaca Group research (2018) and Nous Group research (2019)

³ Ithaca Group, Credit Pathways in VET and Higher Education Final Report, 2018.

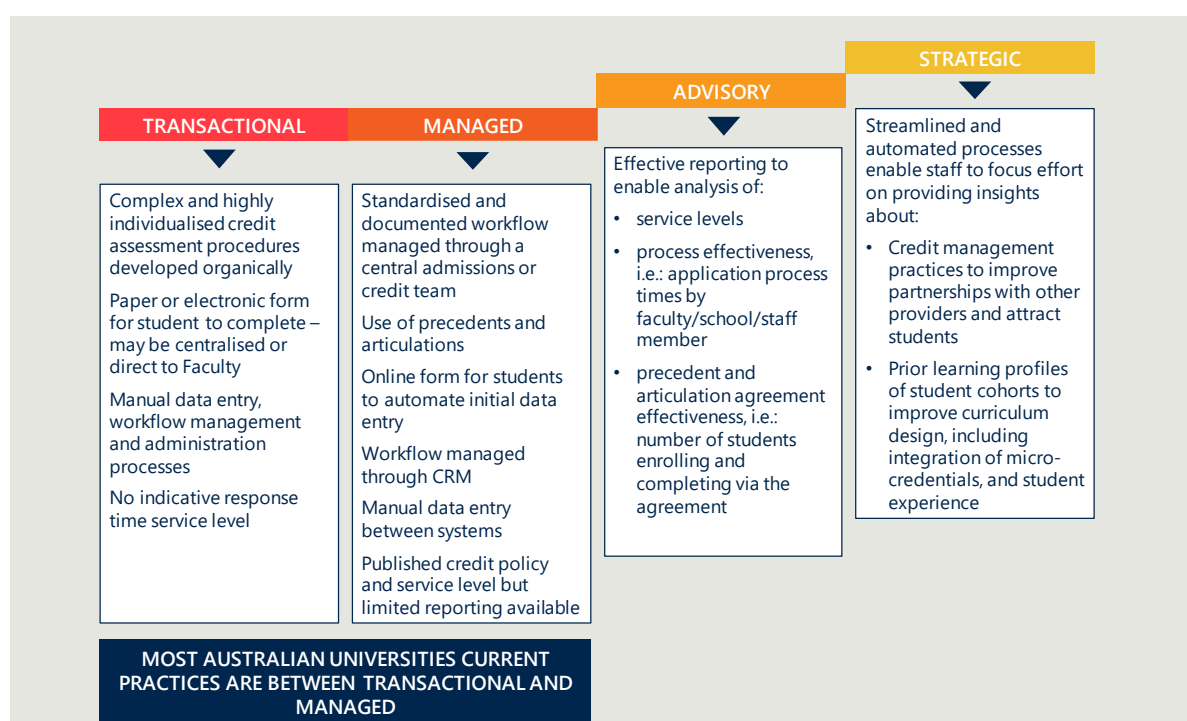
industry needs (also resulting in increased student numbers); enhancing (or in some cases preserving) the institution's reputation.

2.2 Current credit management practices are largely transactional

There is a low level of maturity in credit management practices across higher education providers, with the majority using multiple systems with poor integration to manage workflows and data. Some variation is driven by differences in credit demand by student cohorts, but typically variations are derived from the organic way credit management practices have evolved over time.

Figure 1 describes four observable levels of maturity in credit management practices – starting at transactional through to strategic.

Figure 1 | Levels of maturity in credit management practices



Consultations through this project suggests that credit management practices across most Australian universities are largely transactional. For example, one university observed that fluctuations in international student demand led to changes in how important the university executive viewed the importance of credit management service levels. When international student demand had dipped, credit management became a leading priority, but then once the demand stabilised, improvement to credit management was no longer a pressing issue or focus for resourcing.

A small number of universities have moved towards a more strategic approach by implementing credit management systems, however they are yet to realise the full benefits. One university described the implementation of their credit management system that enabled a move from transactional towards advisory over an 18-month period. Their system integrates across its application portal, draws heavily on precedents and provides automated reporting to inform strategic decision-making. This university was careful to state that they are only now considering the advisory benefits of the system.

The use of precedents and articulation agreements is a practice that is highly variable across universities. The case study below describes some of the differences in practice in further detail.

Case Study 1: Use of articulation agreements and precedents

Current practices case study: Use of articulation agreements and precedents

Most universities have negotiated several articulation agreements to facilitate credit pathways for admission to their institution. The exact number of these articulation agreements varies widely, from 10 to more than 600, alongside other institutions with no central register of their articulation agreements as a consequence of their devolved credit management functions.

Increasingly, universities appear to be adopting use of precedents over articulation to optimise their credit pathways. Several universities reported little or unclear value in articulations, as their credit policies meant that the same diploma receives the same credit regardless of whether it is associated with an articulation agreement or not. At the same time, other universities have large precedent databases with unclear value. For example, one institution reporting more than 9,000 precedents with many precedents only applied once, not validated, and have no recorded expiry date.

Current resourcing assigned to manage these practices varies across institutions. Several institutions had part-time resources (0.4-0.5 full time equivalent) dedicated to management and maintenance of articulation agreements and/or precedent database. Another university had a single senior coordinator resource in place where precedent management is one element of their day-to-day responsibilities.

2.3 Current pain points impact the student experience, quality management and administrative productivity

Most universities describe credit management as an overall pain point which continually features among the top student-related problems they would like to solve. The consultations revealed the following recurring themes across many institutions:

- **Time inefficiency** impacts the student experience and leads to lost conversions. This is most acute for international student cohorts who are generally more willing to shop around between institutions. University management will typically pay close attention to fluctuations in international student enrolments, leading to what one university described as a 'stressful scramble' to expedite these applications within their existing manual systems. Universities reported significant variation in time frames from 3 days up to 2 months, depending on the individual faculty.
- There is **inconsistency of decisions** due to complicated assessment processes and little emphasis on creating and maintaining precedents. One university acknowledged they are aware of situations where similar student circumstances lead to different credit assessment outcomes owing to the individualised assessment practices by subject matter experts. This is further exacerbated as in many cases decision makers do not have access to previous similar decisions or precedents. For example, another university noted that a register of approved course equivalency is not kept so every application must be assessed individually. While universities do not often see student complaints as a result of inconsistent decisions, they are concerned with maintaining academic integrity in this process. Some universities did cite international agent complaints about inconsistent decisions.
- It is often **not possible to track and report** on credit workflow, the pipeline and needs of students, or success outcomes for students associated with particular articulations. The relative

maturity of many universities' credit management systems and practices means that many do not have visibility or access to business intelligence to help drive operational and strategic development in this space. For example, one university spoke about the challenges of extracting any information at all without requesting IT to manually develop and execute a script to pull the data. Another university explained their current processes involve students applying for credit direct to faculty office and tracking does not commence until the application is sent from the faculty to the central registrar, later in the assessment process.

- There is **limited certainty in expected service levels**, leaving students unable to plan effectively and often causing students to delay applying for credit until after enrolment. Current processes, systems and practices mean that few universities are confident to set service levels in their credit policies. For those with advertised service levels, universities were rarely able to meet these, with variations common during peak times.
- There is **no standardised terminology** across the sector which can cause confusion for students in their decision making and navigation of the system. For example, institutional policies around credit may be referred to as advanced standing policy, credit for prior learning policy, credit transfer policy.
- Current processes to collect all required information to inform decisions place a significant **administrative burden** on the student to upload correct course information and on administrative staff to validate or follow up when this information is not correctly provided, introducing time delays in assessment outcomes. For example, one university spoke about the constraints of their current system which does not include a feature to change the status of applications when a credit request has been sent back to a student for further information.
- **Extensive articulation agreements with no visibility of effectiveness**, performance or student outcomes deriving from the articulation agreement. For example, one university is trying to move to precedents over articulation agreements, several universities report between 300 and 600 articulation agreements in place, others have no central register of the articulation agreements. One university cited the lack of information about their articulation agreements had created disagreement and confusion about how their institution could leverage them for improved recruitment outcomes.
- **Variations in processes and practices within the same institution** between different faculties and colleges, or for different student cohorts lead to disjointed datasets, potential duplication in work effort for central administration to coordinate across different processes, or variations in student experience based on variability in performance across the various teams involved in the process and limited workflow. Some universities have different operating models for postgraduate and undergraduate applicants, applicants and enrolled students, international admissions and domestic admissions, or de-centralised credit functions with no central administration.
- Credit applications are **disjointed from admissions applications**, creating an additional data entry step often for both students and administrative staff. For example, one university reported a system where their prospective students were able to create a portfolio and receive a credit outcome quote but to apply that credit as an enrolled student they must rekey information.
- Legacy credit management systems and solutions present **data security risks** in the storage and management of personal student information. For example, multiple universities report using spreadsheets saved on local drives or to cloud based servers (e.g. Google docs) to track credit workflows and outcomes. One university reported they have been delaying any action because of the significant cost involved in building a bespoke solution but acknowledged that they will inevitably need to address the problem in the near term.

2.4 Current credit management options

Currently, there are four credit management solution options for the Australian market:

1. **Tracking spreadsheets.** The most commonly used software is Microsoft Excel or cloud-based services like Google Docs. In some instances, these are shared via email, others use collective SharePoint solutions for storage and shared visibility across staff involved in the process.
2. **Integration with existing Customer Relationship Management (CRM) platform.** For example, several universities have workflow management and/or outcomes record management integrated with their CRM.
3. **Procure a third-party solution.** For example, one university within the consultation group procured and customised a third-party solution.
4. **Commission a bespoke solution.** Several universities use bespoke solutions to address all or part of the credit management function. For example, one university commissioned a bespoke solution for admissions which includes some credit management functionality, another has a bespoke solution specific to credit management.

Several universities apply a combination of systems to serve different purposes, for example use of ServiceNow for workflow management or storage of the precedent database, alongside use of Excel for tracking. Each of these options are presently in operation across different universities within the Australian market and each solution has particular benefits and disbenefits.

3 A unique offer for the sector

The UAC solution, named UAC Advance, is designed to address current pain points inherent in the credit management lifecycle. The design of the end-to-end solution incorporates the flexibility to be implemented across the variety of different providers' current practices, systems and strategic priorities. UAC Advance is designed from research and in close consultation with the Australian Higher Education sector.

The UAC Advance solution is designed to make the credit management process easier, and to be tailored based on existing settings, preferences, business rules and priorities of individual institutions. It is a scalable and integrated credit management solution for institutions that provides tools and services for managing and issuing academic credit to internal, domestic and international applicants/students. The solution uses technology enabled capabilities to increase efficiency and provide comprehensive information to administrative and academic staff in the assessment and decision-making process.

An overview of the solution is visualised below.

Figure 2 | Overview of UAC Advance credit management solution



The four main elements of the UAC service offer for institutions are:

- streamlined application
- management suite
- credit allocation and notification
- business intelligence and reporting.

Each element is described further in Figure 3 overleaf.

Figure 3 | Service offer



4 Value proposition for universities

Most universities consulted report that their current approaches to credit management are a pain point for students and their institution, and to date there is no compelling solution in the market.

The UAC solution could move universities to a place where credit management strategically informs recruitment, retention and curriculum design. It will provide a rich data source for institutions that will fill key business intelligence gaps and lead to a reduction in credit management costs for many universities.

A value proposition for universities has been defined based on consultation with universities, supporting data collection, and working sessions with the UAC Executive team. The value proposition is designed to deliver a clear point of difference to what's available in the market and meets the needs of universities and students as well as leveraging UAC's existing strengths and capabilities.

The value proposition is outlined in Figure 4 and described further below.

Figure 4 | Value proposition for a UAC-delivered credit management solution



4.1 A credit management solution will deliver better service, *improving the student experience.*

Universities recognise the impact that fast, accurate and reliable credit decisions have on student experience. However, consultations revealed that few universities provided certainty to students about decision timeframes using advertised service levels, leaving students unable to plan. Further, even with advertised service levels, universities were rarely able to meet these, with variations common during peak times.

The challenges of uncertain credit assessment timeframes are particularly acute for international students whose visa status may depend upon their expected program duration, which is impacted by recognition of prior study. Several universities observed that many international students would deliberately withhold credit applications until after admission to accelerate the admission decision. Post-admission credit applications also result in the reissuing of confirmation of enrolments and potential implications for student visas.

The credit management solution will help institutions to better manage bottlenecks through more streamlined and efficient processes, application triaging and integrated workflow management. This will reduce application times and provide universities with greater confidence to set and achieve more rigorous service levels, providing students with greater certainty.

By delivering faster and more reliable credit decisions, one of the primary barriers for international students not applying for credit alongside their admission application will be removed, leading to greater up-front certainty for students and less administrative burden for both universities and students.

4.2 A credit management solution will deliver faster credit assessment, leading to *improved conversion*.

Increasing competition for students has forced many universities to place concerted effort on conversion from enquiry to enrolment. Conversion rates across this cycle are now key performance indicators for many institutions with institutions now tracking conversion from enquiry to application, application to offer, and offer to enrolment. Universities understand that the earlier a student commits to an institution the more likely they are to enrol.

For students, the decision to enrol at a university requires the consideration of multiple factors: course design, reputation, location, duration and cost. Where relevant, the application of credit at the time of admission provides students with certainty and confidence in their choice, increasing their likelihood of conversion to enrolment.

Most universities report lengthy credit assessment processes that do not meet student expectations. In some cases, this delays admission decisions and in others, universities advise students to apply for credit post-enrolment. In both circumstances the university's response can erode a student's certainty and confidence in their choice, potentially leading them to seek other options. The length of time taken to determine a student's credit outcome is likely to impact that student's enrolment decision. One university estimated that the conversion of international student applications rose from less than 10 per cent to an estimated 50 per cent when credit assessments were resolved in under 1 week.

The UAC credit management solution will assist universities in delivering process efficiency by providing workflow and automated information collation. These features will shorten the time it takes for an enquiry to reach an assessor and reduce the overall assessment time. Institutions will be able to improve their overall application processing times and improve conversion.

4.3 A credit management solution will deliver *new intelligence* to improve key institutional outcomes.

Universities are now operating in an environment where strategic recruitment and partnership practices are critical to growth and financial sustainability. Universities require rich data sets that can inform these practices, giving confidence they are making evidence-based decisions that will lead to long-term success.

Most universities are currently relying on their admissions systems and CRMs to provide business intelligence about their prospective students and to a lesser extent their key partners. These systems are largely limited to understanding student demographics, enquiry history and basis of admission.

Whilst universities store the qualifications upon which they base their admissions decision, the full student learning history is not visible to almost all universities. For students their prior learning history is a critical consideration in their selection of a course. Almost every university consulted advised that they had no visibility of this information and were largely operating 'blind' when it came to understand this key aspect

of a student's learning history. With regards to articulation agreements set up with key partners, universities also reported that they had little visibility of the effectiveness of these.

The lack of visibility across these two areas in most universities has led to ineffective and inefficient practices, such as:

- a proliferation of articulation agreements all requiring manual management and oversight
- inefficient credit assessment processes due to a lack of precedent visibility
- course design that does not respond to student's prior learning.

UAC's credit management platform will capture student profiles including their prior learning history, student research and browsing analytics, successful and unsuccessful credit pathways, credit assessment process workflows and performance, and a comparison of precedents and business rules across institutions. This type of dataset could inform both operational and strategic decisions, providing a comprehensive view of areas that many consulted institutions reported currently lacked visibility.

This data will provide:

- An objective means to assess the value of a confusing and organically-grown array of articulation agreements. This will allow renewal efforts to be focussed only on those agreements that yield significant value for the university and to realign recruitment efforts.
- More readily available information about the types of courses that students are seeking credit for and their learning history. This will be used to identify program gaps which will inform new product offerings.
- An understanding of the application of precedents, to inform future partnerships and curriculum design.
- Deep insight about students with the learning profile universities are seeking for specific courses. Universities will be able to use this information to target their recruitment efforts when sourcing desired student cohorts.

Articulation and precedent information when linked with student performance data will unlock greater understanding of successful student cohorts to inform how to better target resources that support student success.

4.4 A credit management solution will provide reporting to inform *process improvement*.

In a constrained and uncertain funding environment, universities operate with constant pressure to improve processes to deliver savings and/or refocus effort on tasks that impact key outcomes.

Except one university who has implemented an institution-wide credit management solution, all universities reported their credit management processes included unnecessary duplication and a high degree of manual labour. Consultations revealed that many universities are struggling to report on and provide a single point of visibility into credit assessment workflows and credit outcomes. Universities also identified the pain point that accountability for decision making is unclear which makes it difficult to audit decisions to ensure they are robust and applied effectively and consistently.

Current practices often involve a considerable degree of resource-intensive data consolidation across a range of different systems. In some circumstances, the desired data isn't collected at all by these systems. Consequently, reporting may be conducted infrequently or limited in scope and universities have little visibility into their performance and inability to audit decisions. Universities have been unable to calculate

or estimate the value of their credit management processes and equally have not been able to easily identify how to improve them. One university described this situation as 'a sleeper', meaning that it was a process that was completely invisible to the university yet had enormous potential to improve outcomes.

A national credit management solution will extract key process information effectively without the need for manual compilation. At a minimum, universities will be able to quickly see the number of credit applications that are active, how long an application has been awaiting assessment, prior institutions and subjects, and which precedents and articulations are most frequently applied. Additionally, they will be able to understand which of their academic units are applying credit, how quickly they are processing these, and the percentage granted. This will lead to greater opportunities for performance comparison within a university as well as between institutions with the availability of sector level data. As performance becomes more transparent, measurable and comparable across institutions, sector-informed performance targets and greater shared learning will result, leading to improved processes.

The platform will also provide a catalyst for institutions to review the end-to-end credit management process, tidy up practices, curricula and reduce any unnecessary complexity in their approach.

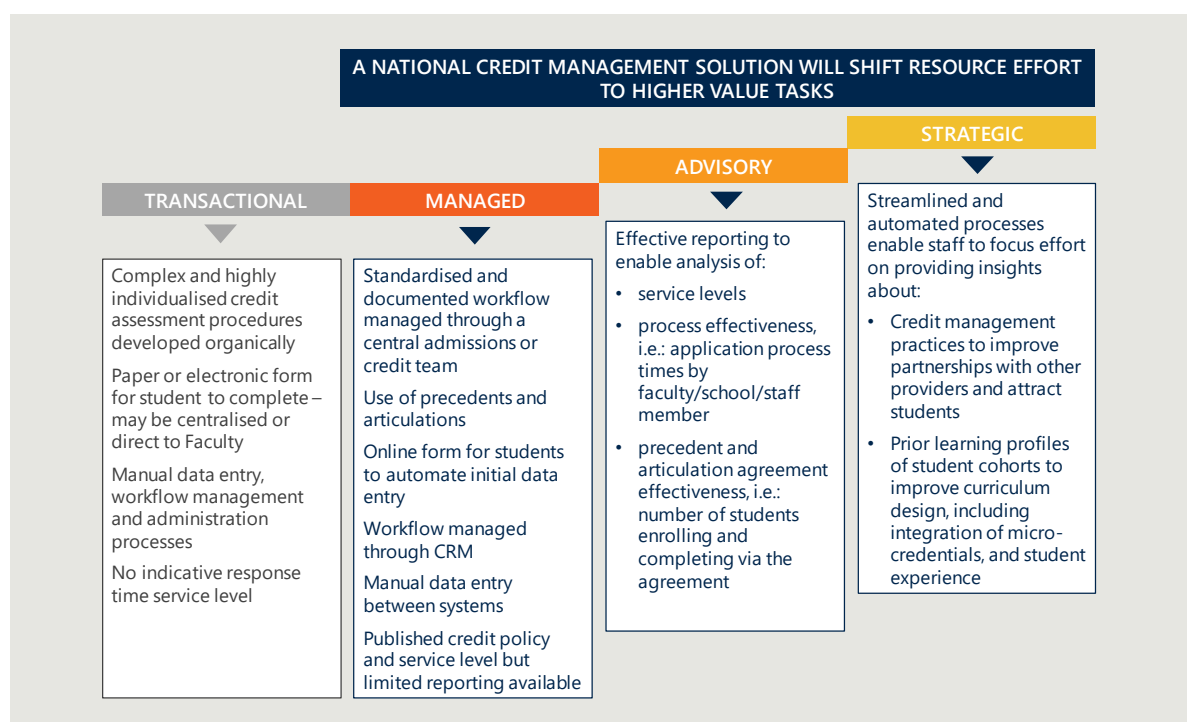
Data security with their legacy credit management systems is another identified issue for some consulted institutions. The platform will provide appropriate safeguards that will minimise risk in this area. The platform will also provide collated extracts relevant to compliance activities that may be challenging for institutions to compile in their current state.

4.5 A credit management solution will increase institutional *productivity*, shifting resource effort to higher value tasks.

Universities generally reported approaching credit management as a transactional task with limited ability to think and use the credit management function strategically. Universities felt challenged by the task of maintaining their current administrative workflows, before even considering diverting resources into more advisory and strategic activities.

A national credit management solution will provide a greater efficiency through features such as workflow management, automatic precedent checks and a more complete repository of relevant course outlines for institutions. This will reduce the administrative burden on those performing credit management roles, including academics, and enable their time to be re-allocated to higher-value strategic and advisory activities that further enhance institutional performance. Figure 5 below highlights the shift in maturity of credit management practices that a national credit management solution can enable.

Figure 5 | A national credit management solution will support providers to adopt higher maturity credit management practices



4.6 A credit management solution will deliver economies of scale, *reducing solution cost* for individual universities.

Most universities reported a strong desire to improve their credit management processes, with one university stating it appeared consistently in their top five student administration improvement initiatives. While some consulted universities have implemented their own systems, they reported that these systems had failed to meet expectations or were still in early stages of evolution.

Most universities described their credit management processes as being complex, fragmented, lacking transparency, and supported by ineffective systems. This has made it difficult for universities to calculate a true cost of delivery for their credit management services. Importantly, most universities have been unable to calculate a viable return on investment for improving credit management processes.

Analysis from a small sample of participating universities estimates that credit management services currently cost universities between an estimated \$36.5 million annually, averaging \$125 per credit application. The total institutional cost depends on many variables including: credit application volumes; proportion of credit applications that are successful; dispersed or centralised credit management delivery; efficiency and effectiveness of institutional systems and practices in place. For example, there is wide variation in credit assessment practices (ranging from 20 minutes to 1 hour of academic time per assessment, and from 10 per cent up to 100 per cent of credit applications requiring academic assessment). Further cost analysis is presented in Appendix C.

With a collective approach, a credit management solution will reduce the cost of improving credit management processes for individual universities. Instead of each institution purchasing or developing its own credit management system, the UAC solution will share this cost across participating institutions. The platform also allows for tasks that each institution currently performs individually to be shared across the sector, avoiding repeated work. For example, currently each university maintains its own precedents, cross-

referenced against other institutions' curriculums. A national solution will enable universities, where they choose, to utilise precedents set by other universities.

Many of the consulted institutions view the recent sector collaboration to deliver My eQuals as a model for how the sector could come together effectively to solve problems. Many universities stated the timing for a collective approach to a credit management system is well aligned with the trust and goodwill arising from My eQuals.

4.7 A credit management solution will *prepare institutions* for future demand for recognition of non-traditional learning.

The social shift to lifelong learning delivered in shorter, more accessible courses is challenging tertiary education institutions to consider innovative approaches to curriculum design. This is leading to an increase in non-traditional education products, such as MOOCs, short courses and micro-credentialing. Over time, students will increasingly expect universities to consider this prior learning as part of their admission application.

Many universities consulted report their credit processes are not adequate for current demand and acknowledged they are concerned they will not be able to address future demand.

The UAC solution will provide a scalable approach to respond to increased credit complexity while simultaneously helping institutions to minimise the resources required for a growing number of transactions. The solution will also provide a catalyst for many institutions to review and streamline their credit policies and accompanying processes ahead of greater complexity.

4.8 A credit management solution will enable universities to be *ahead of sector changes and future demand*.

The recent Admissions Transparency project led by government required all universities to implement consistent terminology and transparent admissions practices. In this project, the Tertiary Education Quality and Standards Agency (TEQSA) defined admissions transparency as follow: *"students can easily find good quality admissions information that allows them to compare courses and providers and make informed study choices.."*⁴

Credit management is a component of admission and enrolment management practices one in five of students engage in annually. Despite its widespread use and its critical role in a student's enrolment it is a process that remains largely unexamined and unattended by most institutions and the broader sector. Tertiary education institutions apply inconsistent terminology and approaches to manage credit transfer applications. Many universities make credit decisions on a case by case basis reducing consistency and, in some cases, leading to inequity in the granting of credit transfer. Some universities cited complaints from international education agents who were able to demonstrate where students with identical learning histories and credit transfer requests had received different credit transfer levels because two different academics had assessed their applications.

A national credit management solution provides the impetus for the sector to proactively improve its processes. The development of the solution could facilitate a consistent sector-wide approach to credit terminology. This will further extend admissions transparency and demonstrate proactive sector commitment to ongoing Australian education quality improvement.

⁴ <https://www.teqsa.gov.au/latest-news/publications/advice-admissions-transparency>

5 Potential benefits to government and other stakeholders

The UAC credit management solution could also deliver broader benefits across the Australian tertiary education sector – to benefit universities and VET providers collectively, government and policy makers, and the broader Australian community. It will support lifelong learning by:

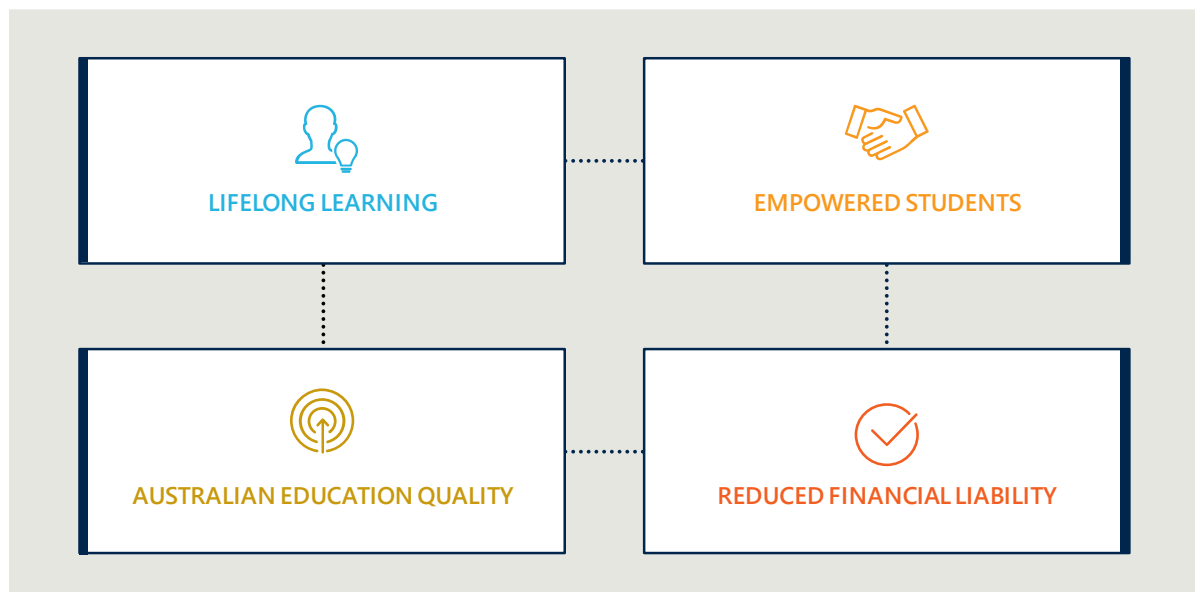
- promoting reciprocal mobility between VET and higher education
- facilitating the use of micro-credentials to gain access to further education.

It will empower Australian and international students to make more informed educational choices and improve educational quality through greater transparency across the sector. These benefits will support an uplift in Australia's human capital and productivity.

A national credit management solution could be a national platform to promote support for lifelong learning and parity of the VET and higher education sectors.

This section explores four potential broader benefits, summarised in Figure 6 and described further below.

Figure 6 | Potential benefits to government and other stakeholders



5.1 A national credit management solution can promote lifelong learning

Lifelong learning is critical to support workforce participation and prepare for the ever increasingly digital and knowledge-based economy. The Business Council of Australia's recent policy paper on education, Future Proof: Protecting Australia through Education and Skills, argues for building a culture of lifelong learning that requires helping learners make decisions and the concept of a "Lifelong Skills Account". The 2019 AQF review is also considering how the AQF can and should recognise new skills, new learning

methods such as micro-credentials, and how the AQF can support learning pathways such as through credit point reference systems.

- **New education products methods including** micro-credentials. Micro-credentialing is now being formally recognised internationally. In August 2018, the New Zealand Qualifications Authority formally recognised micro-credentials in their qualification frameworks. Currently, the Australian tertiary education sector is gradually increasing their number of micro-credentialing initiatives in response to the changing requirements of Australian industry. Many institutions acknowledge the rise of micro-credentialing and other 'dismantling' of traditional tertiary education products and recognise it will contribute to growth in future demand for credit assessment and credit management services. This will impact volume and complexity of service delivery, and likely increase the corresponding transaction cost for universities to manage this process. The UAC credit management solution will be scalable for the rise in micro-credentialing and adoption of standardised credit practices will assist universities to prepare for this unbundling of education.
- **Pathways between VET and Higher Education.** There are common perceptions across the sector that VET qualifications are pathway step in the AQF framework towards higher education, rather than for their unique value in the type of qualifications and education they deliver. Whilst TAFE NSW has a credit transfer website that shows credit pathways into higher education for VET students, it does not reflect the two-way movement opportunities for higher education students into VET. The UAC credit management solution will provide a clearer picture about how higher education learning integrates with VET programs and the opportunities for parallel movement between the two sectors. This could support the increased industry demand for applied skills.
- **A common credit point reference system.** As explored in the AQF discussion paper, an optional AQF credit point system across both the VET and higher education sectors would express learning outcomes for all students in a common currency and demonstrate the equal importance of VET and higher education. Further, many other countries use credit point systems, most notably the European Credit Transfer System that applies across all European Union countries. The UAC credit management solution can support adoption of a credit point reference system if this is an outcome of the AQF review. The UAC solution can also enhance attractiveness of Australia as an overall education destination through improved accessibility for international students through a single national credit solution, with streamlined and transparency over the credit assessment process, regardless of whether credit points themselves are systematised.

5.2 A national credit management solution will *empower students to make informed education choices.*

The amount of credit a student receives has significant implications for their overall qualification cost, their study load and potentially their study duration.

Students currently build up a picture of their credit entitlement through a manual and complicated process. It involves individually locating and reviewing credit policies and corresponding with an array of university touchpoints. This exercise requires repeatedly providing much of the same information to separate university systems, is time consuming, and is often prone to delay. Credit policies may not be intuitive to interpret and apply, or easily accessible for students. The sector's current approach to credit poses a barrier to students being able to make fully informed choices about their education pathway. Its complexity and lack of transparency means that students are often not fully aware of the options available to them. This could lead to students unnecessarily repeating learning and incurring additional cost.

A national credit management solution will empower students (and agents acting on behalf of students) with a timely and in some instances an immediate indication of their credit options. The platform will eliminate the need for data duplication as students will only need to enter their details and academic history on a single occasion. It will save students the need to individually navigate complicated credit policies and then develop their own way to record and consider their findings in a single place.

Students will have access to a greater range of information that will support them in making a more informed and personal education choice.

5.3 A national credit management solution will deliver consistent credit terminology and outcomes, *improving Australian education quality.*

Through the recent Admissions Transparency project, institutions have worked to improve their practices and together implement a sector-wide approach to admissions terminology. This step will improve the student experience and the perception of the overall quality of Australian education.

For 20 per cent of all students, when considering a university course, recognition of prior study is a key consideration. The current landscape of credit terminology and practices is, at best, confusing and overwhelming for all students. Institutions have taken individual approaches to their credit terminology, as they had in the past for admissions.

The UAC solution will help to align terminology and decision outcomes. The development of a platform specifically for the Australian context will support standardisation of terminology nationally, including alignment with any updates to AQF terminology that may arise as outcomes of the 2019 AQF Review.

The UAC solution will automate the process of identifying the relevant rules and precedents that exist for a given application leading to less opportunity for rules to be overlooked through manual oversight. The solution will display information for decision makers about the outcomes of previous credit applications of the same or similar nature and allow institution to report on and review variations in outcomes to audit quality and inform updates to institutional policies, procedures and practices.

A streamlined and transparent credit management solution will improve Australia's standing overall as a globally competitive international student destination by clarifying for student's key decision parameters and providing more accurate information up front in the pre-application phase.

5.4 A national credit management solution could reduce overall tertiary education cost to government.

An institutional and a national credit management solution will reduce barriers for students seeking credit for prior learning and qualifications. If the solution is promoted widely to students, at an institutional and a national level, is likely to lead to more students with prior learning and qualifications applying for credit when they are considering tertiary education. Students who previously did not apply for credit, due to the process being cumbersome and confusing, would now find it easier to do so. As mentioned in section 5.2 above, this could result in a greater proportion of students unnecessarily repeating learning and incurring unnecessary costs. Overall it is possible that this could lead to a reduction in equivalent full-time student load (EFTSL) across the sector for traditional education products and consequently a reduction in Higher Education Loan Program (HELP) loan liability.

6 Critical implementation factors

Working with tertiary education institutions to implement a national credit management solution will require careful consideration of institutional operating environments. Consulted institutions provided insights on how UAC could ensure effective execution of a national credit management service. A whole of sector approach was preferred, along with UAC providing resourcing to support implementation.

The Ithaca research identified that some of the barriers identified to implementing credit pathways for universities include administrative costs and concern related to reduction in provider income from student fees and reputation risks for quality. These themes were also reinforced during consultations completed for this engagement.

6.1 A national credit management solution requires sector-wide commitment

With respect to a national credit management solution, all universities consulted observed the value proposition would be limited where not all universities are involved. Even an NSW/ACT-only approach, focusing on UAC's current member base, would be perceived to reduce the value proposition particularly for an international student market that is typically more mobile.

It is recommended UAC focuses on providing 'white label' credit management services to individual institutions. Several universities indicated interest in working with UAC immediately to establish a streamlined credit management service for their institution.

To build a national credit management solution, it is recommended UAC build early commitment from universities. Many universities cite the My eEquals model as a potential template for obtaining commitment early in the development process.

6.2 Co-design, testing and validation with users to reduce barriers to implementation

Many universities identified the time and resourcing cost of implementation and adoption as a barrier to execution. The decentralised nature of many institutions' credit procedures means that many users (such as academics or other subject matter experts) will need to interact with the solution. UAC will need to invest in user experience design to ensure easy adoption by critical users. All users of the system will need to be involved in its early and continuing design. It is recommended UAC form a design reference group made up of different types of users from several institutions.

Simultaneously, the credit management solution will be expected to handle the breadth of complexity and diversity of credit assessment processes and be able to integrate with a large number of existing systems. The specification will be complex, as it will need to accurately reflect each institution's individual requirements.

UAC will further validate the service offer design and technical system specifications through testing both with end users and working with IT services divisions to understand integration requirements. A pilot implementation with an initial representative group of universities will also minimise risk.

6.3 Customisation and integration with existing systems

Institutions who have already invested in a bespoke, third party or integrated in-house solution expressed clearly, they expect the UAC solution to provide a step change in available features and performance to address pain points within their current systems. This largely focused on effective integration with existing student management or portal systems to reduce duplication of effort and data entry between systems and enable effective reporting, business intelligence and more sophisticated management of precedents, articulation agreements and business rules.

6.4 Resourcing and quality assurance to drive success

Institutions also expressed concern about the resourcing commitment required for supporting initial integration and implementation, and ongoing maintenance to ensure accuracy and validity of course information, business rules and precedents.

Many universities identified that they may require different types of internal resources to oversee administration of the system and the management of articulation agreements, business rules, precedents and operational performance. It was also noted that if one or more institutions fail to keep their credit transfer information up to date it will compromise accuracy and effectiveness of the system, directly impacting student outcomes and experience.

Universities also raised questions about what the proposed model is for integration and implementation resourcing support to accompany the service offer. Many universities made references to the My eEquals project and the services provided by Higher Ed Services as a suggested model for supporting success implementation.

UAC will consider options for appropriate resourcing, quality assurance processes and governance to drive the success of the solution. APIs to integrate with institutions existing credit databases are another feature of the UAC solution that will assist in minimising this risk.

6.5 Transparency on fee model

Most institutions also raised questions around the proposed fee model and were interested to understand fees associated with integration and implementation, ongoing services and whether different levels of service and functionality will be proposed. Several universities expressed the importance for universities to be able to choose their level of service based on the current maturity, needs and strategic prioritisation of their credit management function. Other universities expressed concern about highly bespoke programs that universities pay additional money could be incongruent to UAC's organisational purpose and commitment to members.

Appendix A Definitions of key terms

DEFINITIONS	
Credit	Credit is the value assigned for the recognition of equivalence in content and learning outcomes between different types of learning and/or qualifications. Credit reduces the amount of learning required to achieve a qualification and may be through credit transfer, articulation, recognition of prior learning or advanced standing. (Source: AQF Glossary of Terminology).
Credit transfer	Credit transfer is a process that provides students with agreed and consistent credit outcomes for components of a qualification based on identified equivalence in content and learning outcomes between matched qualifications. (Source: AQF Glossary of Terminology).
Credit management	Credit management is defined as the organisational function that includes the following activities and processes: credit transfer, recognition of prior learning, articulation, assessment to determine credit outcomes, management of articulation agreements, precedent database management, credit workflow management.
UAC credit management solution	The UAC credit management solution – UAC Advance – includes a platform and a service offer targeted for universities. It is described further in section 3.
Micro-credentialing	Micro-credentialing is the means of “certifying attainment of smaller and more specific elements of learning than are attested to by a degree”. It allows a student to gain recognition of specific skills, particular to an industry area, by potential employers.

Appendix B Participating institutions

Eleven institutions (ten universities and one VET provider) participated in consultations facilitated by Nous Group to inform this business case. Seven institutions also provided additional data about their credit management volumes and costs (noted with asterisks).

- Australian National University
- Charles Sturt University*
- La Trobe University*
- Royal Melbourne Institute of Technology*
- TAFE NSW
- University of Canberra*
- University of Notre Dame*
- University of NSW*
- University of Newcastle
- University of Tasmania
- University of Wollongong.*

Appendix C Credit management opportunity analysis

This appendix outlines the quantitative analysis to inform a business case for a national credit management solution for the tertiary education sector.

Seven of the ten participating universities provided partial data about their credit management functions. The student enrolments across this sample of universities represents 19% of all student enrolments across the university sector in 2017.

The small sample size and reduced availability of data limited the scope of analysis. Conservative estimates and assumptions have been applied to all calculations in this section.

This appendix includes three sub-sections:

1. **Size of opportunity** – total credit transaction volume nationally and estimated current savings to Government
2. **Cost analysis** – total current credit management cost for the sector
3. **Other data related to current credit management practices** – for reference.

C.1 Size of opportunity

Analysis of credit transaction volumes at each institution was completed to inform an estimation of the total current annual credit transaction volume nationally.

Table 1 below outlines values derived from analysis of data provided by participating institutions. An asterisk (*) in the sample size column of the table indicates the sample includes data from a Go8 institution.

Table 1 | Values derived from analysis of data provided by participating universities

Measure	Minimum value	Maximum value	Sample size*
Overall Total credit transaction volume (i.e. successful and unsuccessful as a percentage of total student enrolments)	5.5%	30.9%	N = 3-5
Overall Successful credit volume (number of students successfully awarded credit as a percentage of total student enrolments)	5.0%	23.9%	N = 7 *
Overall Successful applications as a proportion of total credit applications	45%	93%	N = 3
Internal transfer only Total credit transaction volume	-	-	No data
Internal transfer only Successful credit volume	6.1%	16.6%	N = 3 *

The above values were applied to estimate the opportunity size. Two alternate methods were applied to calculate the total credit volume as presented in Table 2.

Table 2 | Estimation of total credit volume

Description and assumptions	Outputs
Extrapolation of total credit volume across Australia <ul style="list-style-type: none"> Median proportion of successful applicants across the sample size = 15% (total successful applications = 43,400 / total enrolments = 280,000) Our sample of 7 universities represents 19% of the total enrolled student population Average success factor is 45% (sample of 3, no Go8 data) 	<u>Successful applications</u> 220,000 students successfully awarded credit annually (15%) <u>Total applications</u> 490,000 students apply for credit annually (33%)
Alternate calculation of total credit volume across Australia <ul style="list-style-type: none"> Median proportion of successful applications by student type: commencing domestic (23% +/- 10%); commencing international (23% +/- 14%); continuing students (14% +/- 4%) Extrapolated by applying the median proportion to the total number of students in the sector Average success factor is 45% (sample of 3, no Go8 data) 	<u>Successful applications</u> Domestic: 95,000 International: 40,000 Continuing: 125,000 Total: 260,000 students successfully awarded credit annually (18%) <u>Total applications</u> 580,000 students apply for credit annually (39%)

Based on this information, an estimate of current savings for Government has been derived and is presented in Table 3. Based on insights from consultations and available data, there is no visibility of potential increase in government savings. However, a national credit solution has the potential to improve transparency of current savings delivered nationally.

Table 3 | Estimation of total current savings to Government

Assumptions	Output
<ul style="list-style-type: none"> Assume between 220,000 and 260,000 total successful credit applications (from Table 2 above) Assume 66 per cent of those applications are attributed to domestic students who are eligible for FEE-HELP. Assume minimum one course credit per successful application Assume maximum 2019 student contribution for Commonwealth supported place for Band 2 - \$9,359, assume average course is 0.125 EFTSL Total amount of outstanding HELP debt to \$54.0 billion for the 2016–17 financial year. 	\$170 million - \$200 million per annum This represents conservatively 0.3% of total outstanding HELP debt.

C.2 Cost analysis

Nous' cost-benefit logic framework developed at the commencement of this project is shown in Figure 7 below. Findings aligned to Parts 1 to 3 are presented in Table 4 overleaf.

Part 4 non-financial benefits are explored in sections 4 and 5 of this report. Financial benefits for universities are not reported as consulted universities reported that student experience and quality are seen as higher importance benefits than cost reduction. The multiplier effect has not been considered as consulted universities also predict limited net increase or decrease in EFTSL.

Figure 7 | Cost-benefit logic framework

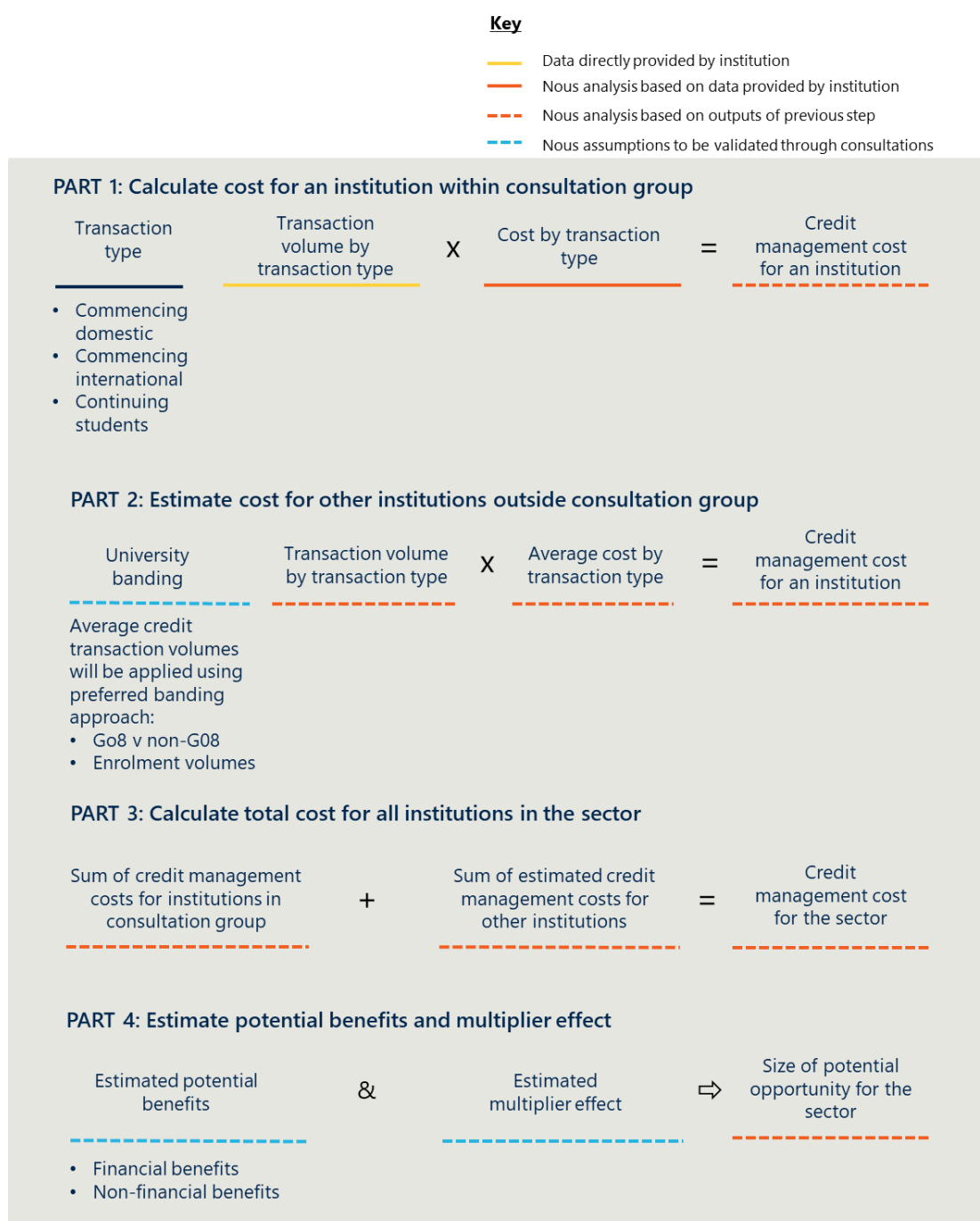


Table 4 | Cost analysis findings aligned to the cost-benefit logic framework

Step in the cost-benefit logic	Outputs
PART 1: Calculate cost for an institution within consultation group	<p><u>Total costs for institutions within consultation group:</u></p> <p>\$1.5 million</p> <p><u>Range of annual cost for credit management function for participating institutions (N=3):</u></p> <p>\$100,000- \$730,000</p>
PART 2: Estimate cost for other institutions outside consultation group	<p><u>Estimated costs for other institutions:</u></p> <p>\$35,000,000</p> <p><u>Data limitations and assumptions:</u></p> <ul style="list-style-type: none"> • No banding approach applied (no Go8 data collected). • Transaction volume calculated overall (not by type) applying the conservative estimate Table 2 above. • Whilst the average credit transaction volume = 33% of total enrolled students (based on calculation in Table 2 above), a conservative estimate of 20% is applied to account for sample size and no visibility of Go8 data. • Average proportion of transactions that require academic time = 70%. • Estimated average academic or subject matter expert time per application = 30 minutes. • Estimated average academic or subject matter cost per application = \$54 (based on 30 minutes at average annual salary rate of \$197,500 inclusive of on-costs). • Average professional staff costs per application = \$90 (based on sample size of 3 from data collected). • Average annual system costs are excluded, due to the diverse range per institution in sample size and many universities reporting this saving would be minimal with the introduction of a UAC solution.
PART 3: Calculate total cost for all institutions in the sector	<p><u>Total annual sector cost for credit management (excluding system costs):</u></p> <p>\$36,500,000 annual costs (~\$850,000 per university)</p>

C.3 Other data related to current credit management practices

Additional data points related to current credit management practices that were collected through this project are summarised in Table 5.

Table 5 | Other data related to current credit management practices

Measure	Minimum value	Maximum value	Sample size
Estimated average academic or subject matter expert time per application	20 minutes	1 hour	N = 4
Percentage of applications requiring academic or subject-matter expert assessment	10%	100%	N = 6
Professional staff FTE	0.4	4.5	N = 4
Total institutional cost per credit application	\$31	\$220	N = 3
Annual system costs	\$0	\$100,000	N = 6
System implementation costs	\$150,000	\$2 million	N = 2