KPMG

Victoria University of Wellington

CRM Review

V1.0

19 September 2019

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Contents

1. Executive Summary

1.1 Background

Victoria University Wellington (VUW) has a complex landscape of over 400 information management and technology systems within schools, faculties and departments. A recent addition were CRM solutions which were intended to provide a single view of student information to university staff. The CRM solutions were sourced from a US company called Ellucian, who are a specialist software company to the tertiary education sector. VUW has purchased several packages from Ellucian including the core student administration system, Banner.

An important factor in the purchasing decision around CRM solutions was the premise that integration amongst the Ellucian package applications would be straight forward, flexible and a number of key outcomes would be met. VUW purchased 'CRM Recruit' to manage prospective students and associated processes (including admissions) and 'CRM Advise' to manage existing student processes including support for student retention.

VUW is seeking confidence in its on-going decisions in respect of CRM. KPMG has been engaged to assist VUW with an impartial and independent review of the CRM solutions and to provide an independent architecture assessment, insights and direction.

This report is the output of the review and reflects the work performed on-site during August 2019, documentation review and Q&A thereafter.

This report assesses the existing CRM solutions in respect of:

— Alignment to the Industry Frameworks and Standards – how the solutions align with Educational sector and trends, university ICT Strategy and wider standards and guidelines
— Extent to which the CRM solutions are fit for business purpose and will meet key customer and user stories envisaged during the procurement process
— Alignment to business and departmental processes and where these processes have been modified
— CRM solutions capability assessment including the extent and impact of configuration or customisation
— Identification of associated key technical and process constraints
— Extent to which the systems are being leveraged and used for the purpose they were intended to serve
— Ongoing supportability and roadmap

1.2 Context and Summary

More and more higher education institutions are adopting customer relationship management solutions to better attract, engage and communicate with their students. This technology is intended to accelerate maturity of student lifecycle management in terms of functional processing, governance and performance insight data.

CRM within Victoria University Wellington is currently not fit for purpose and is not providing a coherent capability across the student lifecycle. The University is presented with the choices of tolerating the existing situation, investing further in the current solution or consciously looking at alternatives.

We believe that to best leverage the current packaged solution, VUW would require closer alignment to Ellucian's process maps and core product functionality. VUW needs to assess whether the continued adoption of any 'localisations' within the product remain cost effective and sustainable, or whether a substantial proportion of VUW-specific requirements (KPMG estimate 60-70%) could be better implemented by moving to a Microsoft Dynamics 365 Higher Education Accelerator baseline.

VUW needs to consider key aspects of its current organisational design including business process standardisation and the overall technology sourcing approach and delivery model in order to gain the maximum benefit from any future technology decisions.

1.3 Business Case and Vision

We do not believe that the current CRM solution meets the Economic Assessment criteria as set out in the Business Case document of 2014 in respect of investment objectives and critical success factors. Significant elements of the

original scope have not been delivered and a backlog of 'project issues' remains unresolved. The tracking of benefits is not clear and many changes in scope for the solution have resulted in a lack of continuity and a divergence from the original vision.

Given VUW has made significant investment in CRM to date and taken the decision to critically evaluate its future state options, it is clear that VUW recognises the value that CRM capability could bring to the way it facilitates the highest level of engagement and support throughout the student lifecycle.

1.4 Ellucian

VUW is not making best use of the Ellucian package because a considerable amount of reconfiguration has been required to stand the product up for business use. Ellucian's suite of products have defined sets of functionality that currently do not meet with VUW's distributed model of service delivery. To best leverage the capability of prebuilt configuration within the platform, VUW would be required to challenge and modify its current organisational design and operational processes to fit the Ellucian model. Significant elements of the package are not deployed, are under-utilised or overlap with other systems.

Partnership and engagement with the vendor is limited and transactional. The vendor has not been consulted during the development of VUW's digital roadmap. Aspects of customisation, whilst supported by the vendor's product team during project implementation, have resulted in a configuration which is not aligned to the vendor's current product strategy.

The deployment of Ellucian CRM within Australasia is limited in terms of overall footprint and the vendor is constrained in its ability to effectively support change and development of their product within the region.

Ellucian have claimed that they maintain a strong partnership with Microsoft. However, Ellucian's cloud capability is deployed in a multi-instance AWS environment and not able to fully leverage capabilities of the Microsoft Dynamics 365 online platform. There is no committed roadmap for Ellucian to move to Microsoft's Azure cloud platform at this time. The risk here are that Ellucian updates are not available in the current state, and therefore VUW do not have access to product innovations. Additionally, innovations in respect of the 365 online platform cannot be fully leveraged whilst Ellucian remain on AWS as their 'go-to' cloud platform.

1.5 Systems and Business Architecture

We believe that the current CRM solution in conjunction with the combination of incumbent systems and recent add-on product purchases is sub-optimal. It does not deliver against recruitment, retention, process efficiencies and experience improvements required in a modern University. We believe this sub-optimal configuration impacts International, Domestic and PhD students in different ways, but overall leads to a poor capability, inefficiencies and a disjointed student experience.

VUW has a number of initiatives which have touchpoints into CRM. We believe these require much closer alignment and management to support pan-university success, and to avoid benefits in one area resulting negatively in other areas of VUW.

The landscape for managing Higher Education within VUW has moved both externally in the market and internally since CRM was originally envisioned. A number of significant software product and organisational decisions have been made without regard to follow-on affects to other business units. It is difficult to trace these to an agreed over-arching business and technology roadmap.

1.6 Next Steps and Future Roadmap

Overall, we believe a fresh look is required at the proposed purpose of CRM and where each capability resides in terms of the key phases of the student lifecycle. This will support meaningful analytics in order to achieve a connected and coherent view of the student from prospect through to alumni.

In order to provide greater clarity over student experience, we believe that VUW should first focus on the Recruitment story. VUW would benefit from developing a comprehensive and agreed definition of the Recruitment story that incorporates the essential elements through the Search, Engage, and Apply phases. This will require agreement as to the workflow and data inputs and outputs in conjunction with deciding which integrations are prerequisite to other core University systems to provide a 360 degree view of student recruitment.

Our review has highlighted a need to undertake additional steps prior to making any firm decisions in regard to either extending the life of the existing product-set or introducing an alternative. Our assessment also highlights areas outside of the technology domain that require consideration if VUW is to be successful in respect of any CRM decision.

VUW would benefit from a wider scoping and referencing study across the region that focuses specifically on other Academic institutions within the New Zealand context. Understanding successful delivery of CRM that incorporates both the aspects of technical deployment and operating model will enhance future decision making.

Whilst we believe there is merit in a more detailed assessment of alternative CRM solutions, VUW would only truly realise the benefits of this investment if it was complemented with re-consideration of the existing organisation design, operating model modifications, process simplification, and standardisation. The extensive and varied curriculum offered at VUW presents technical challenges in respect of systems support for registration and administration.

Consideration must be given to the roles and mandate of IT and the vendor in partnership with Business owners within VUW. This would be complimented by the development of robust Enterprise Architecture and Data Governance practices.

VUW would benefit from an outcome based delivery model in terms of any future engagement in respect of its CRM roadmap to gain superior value from any further investment.

VUW should re-evaluate investment in people and change to develop a training and adoption strategy that supports the correct behaviour in respect of system and application use.

VUW should re-focus its sourcing strategy to increase collaboration between teams and third party partners to fully leverage its investment in technology.

1.7   Key Findings and Recommendations

Our key findings and recommendations are shown below:

#	Findings	Recommendation
1	**Alignment to the Industry Frameworks and Standards** The existing deployment model is unique and does not conform to either a package or best of breed architecture. In its current form the customisations and deep configurations present challenges for VUW in respect of any vendor or Microsoft baseline alignment. Additionally, a lack of clarity in the orientation between organisational design, platforms, applications, processes and data is impacting VUW's ability to benefit from package efficiencies. Ellucian cloud utilises AWS and does not leverage Microsoft Dynamics 365 online. Therefore, it cannot consume all of the advancements on the 365 online platform. This means that VUW is missing out on product innovations.	— A mapping exercise is required to match elements of key student outcomes and journeys to data and systems. VUW should establish the demarcation between marketing, relationship management and records management functions. — A further determination is needed to ascertain if VUW's ways of working can conform to the Ellucian product and vendor vision. — An assessment is needed to determine the desired CRM hosting strategy and operating model at VUW - (PaaS, SaaS, or Managed Service offerings) — An audit and vendor cloud assessment should be completed to determine the precise facts in relation to any cloud migration approach. — Costs should be derived for the existing customisations within Dynamics to determine the effort to re-engineer. — A decision is required on whether package or best of breed model is most appropriate. This decision will be most successful if it is based on a holistic and comprehensive assessment of end-to-end needs and outcomes, and not on the basis of singular or pre-existing processes. — A further comprehensive evaluation should be undertaken once these steps are completed.

#	Findings	Recommendation
2	**Fit for business purpose** Traceability of requirements cannot be accurately made in respect of the current solution. The existing configuration is not scalable with the current level of workarounds and manual interventions. As a consequence of immature workflow, automation will be difficult to achieve. The demarcation between CRM and other up-stream and down-stream systems is not clear in terms of usage or data lineage, therefore it is hard to determine where different phases of the student lifecycle sit in respect of CRM. CRM is not used across the entire organisation as major segments of the staff population that interact regularly with students do not have access. There is also no effective document management capability to support shared knowledge of the student experience. CRM Recruit does not meet the needs of key elements of the recruitment process. CRM is not fulfilling a central role in respect of Victoria International at the pre-application stage. Insights, a key objective of the business case has not been met. Another key element of CRM, case management has not been delivered.	— Prior to determining the direction for implementing technology, establishing a common way of working would enable greater traction of CRM across all student-centric activities. — Agreement must be reached to simplify and standardise common processes, and these should be mandated using a common toolset in order to avoid inconsistent workflow. — VUW would benefit from initially focusing on the Recruitment process to determine the process steps, data flows and system architecture necessary to rationalise this process. An underlying data model is needed to facilitate this activity. — If VUW is to gain further value in the interim, an immediate strategy should be established for the following key areas: - Data integration approach - Data clean-up approach - Systems and usage guidance documentation and training — A workflow and document management strategy is needed in the short-medium term.
3	**Alignment to business and departmental processes** VUW's variable ways of working in meeting student needs reduce its ability to leverage the current package model CRM solution. The complexity in respect of con-joint degrees and the large, flexible curriculum adds to the challenge of managing admissions and registrations workflow with the Ellucian architecture. These processes at VUW differ significantly from the vision within the Ellucian product. 'Configurations' have been undertaken on a departmental level to enhance the Ellucian pre-configured processes. This has resulted in inconsistent delivery of CRM to local business units. Additional systems have been implemented to fill gaps without full consideration of data inputs and outputs. This has resulted in follow on process impacts, extensive data duplication and repetition of effort.	— VUW should consider the potential benefits of delivering common processes through a student centre of excellence or shared service approach. This includes developing a common set of tools and way of working. — The level of complexity in the curriculum options should be re-evaluated — Registrations and admissions processes should be harmonised in order to leverage efficiencies from a CRM solution.

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#	Findings	Recommendation
4	**Extent and impact of configuration or customisation** The existence of customisations within Dynamics to offer elements of case management and workflow are non-standard in respect of the Ellucian Recruit architecture. The current implementation represents a complex managed state which is not scalable, and is challenging to support. VUW is not able to leverage either the benefits of later versions of Dynamics 365 Online or the package benefits of the Ellucian product set in the current configuration.	— As assessment is required on how CRM Recruit fits with additional marketing tools in delivering the full student recruitment journey. — Further analysis is required to determine if the Ellucian Advise product can replicate the case management customisations that have been developed in CRM Recruit. The vendor should be consulted in completing this assessment. — Technical and timing constraints of the vendor should be established in respect of the CRM Roadmap. This would be determined through an audit of the environment.
5	**Key technical and process constraints** Processes are non-standardised and developed to achieve local needs. This has resulted in systems and data workarounds to compensate for these capability gaps. There is no data model to support standards for data integration and process flow. The result of this is poor data integrity and inconsistent process execution and student experience.	— VUW must approach systems and data flows in the context of the complete student journey to avoid further conflicts in respect of data integrity and process work-arounds. — VUW need to invest in the development of an agreed workflow, with a data model to support this. — A common Data Dictionary is needed.
6	**Extent to which the systems are being leveraged** Six processes have been configured in CRM Recruit, however the full capabilities envisaged within the CRM business case have not been delivered. Some elements of the recruitment journey are incomplete and others have been superseded by the Marketo platform, which leads to inconsistencies in delivering the case management journey. The platforms are not being leveraged in respect of retention or rich analytics to deliver key information that supports academic outcome management. Only a sub-set of staff have access to CRM, circa 250.	— We believe that the existing platform should not be extended to the additional population until results and recommendations are available from the CRM Advise pilot. — An assessment is required as to whether the Ellucian suite of products is a good fit for VUW in supporting its ability to retain and case manage students. — A decision is required to validate the roadmap options in terms of maintaining Ellucian architecture or taking a new direction.
7	**Ongoing supportability and roadmap** Ellucian's support of the platform version compatibility is contracted and supported to include Microsoft Dynamics, with Recruit 5.1 having a Target Sustaining Support Date of 30/6/2020 Intergen platform hosting will cease and a decision is required by mid-2020. As it stands, Ellucian currently have no committed roadmap to migrate their product suite to Microsoft Azure.	— Given the timescale risk, VUW should look to re-host its current implementation prior to any further decisions regarding the Roadmap. — A comprehensive review of the outcomes from the CRM Advise pilot is required. — VUW should look to undertake a comprehensive evaluation of options.

8	**Organisational Design**	— Consideration must be given to the compatibility of organisation design and operating model in its effectiveness for delivering the envisioned student journey before any technology solution decision can be evaluated.
	The existing organisational design results in siloed behaviour, fragmentation of processes, data duplication and inconsistent ways of working.	
	Student journeys are inconsistently delivered and significant gaps exist in VUW's ability to support workflow and comprehensive recruitment and retention analytics.	— VUW may wish to consider how its current organisational design could be modified to deliver a more consistent experience.
9	**Architecture & Data Governance**	— A Data Model is required to develop a common understanding of the VUW's data asset, and to facilitate informed decisions around process and applications usage.
	Data Governance processes and policies are not firmly established and monitored.	
	VUW does not have a common view of its data. Enterprise and Data Architecture are immature, and a coherent and comprehensive data model could not be found.	— A Data Governance framework, including data owners and guidelines for the management enterprise data is required in order to leverage automation and reduce data duplication and reconciliation effort.
	CRM does not feature prominently on the Digital roadmap. Key capabilities such as workflow, automation and data integration cannot be evidenced in the Digital roadmap.	— The role of Enterprise Architecture should be re-evaluated. This should include clarification on the delivery model for Architecture Governance.
	A lack of governance in respect of data integration and the associated up-stream and down-stream implications has led to systems complexity.	— Digital roadmap should be re-assessed in respect of the foundational elements of data integration, workflow and automation. — A Data Dictionary should be developed to facilitate this process.
10	**Delivery Model**	— VUW should re-assess the delivery and support capability of the vendor in this region, and formally capture risks.
	VUW's relationship with the current vendor is transactional and not in partnership. Ellucian's limited footprint and concentration in the region presents on-going challenges around development and change support.	— VUW should assess and look to leverage an outcome based sourcing model for significant areas of change.
	There is no evidence that VUW has leveraged an outcome based delivery model for supply and execution of CRM.	— VUW must consider the need for a much closer working relationship in any future engagement

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2. Background

KPMG has been engaged to assist VUW with an impartial and independent review of its CRM solutions and to provide an independent architecture assessment, insights and direction.

2.1 Objectives, scope and approach

The objective of this engagement is to provide VUW with confidence that the CRM solutions can meet business objectives, achieve student and staff outcomes and are workable in the context of the VUW's organisational structure and processes. A key objective is to determine whether the CRM solutions are fit for business purpose, will meet key customer and user stories and are able to assist in any future determination regarding the Digital Roadmap.

The scope of this report, in terms of conclusions and recommendations, is based on information provided by VUW either electronically or through documentation gathered during interviews with stakeholders.

Additional observations and considerations have been documented to assist VUW in further assessment.

To achieve the proposed scope, our team completed four days of on-site interviews with stakeholders at VUW. A set of CRM related documents were provided for our review in reference to the scope, elements of these were discussed with stakeholders during interviews. A high level analysis of the information was undertaken to determine the substantive outputs and key themes of the review. Further interviews were completed with Ellucian, the primary vendor as well as secondary interviews with key stakeholders. In addition to this KPMG engaged internally within the region to gain supportive context and insight.

3. Findings

3.1 Technology Architecture

The VUW CRM solutions reside in a complex landscape of applications and systems with a large amount of technology debt. There is also a significant portfolio of proposed technological change, and this has the potential to further increase the complexity of this landscape in the short-medium term.

The current CRM is primarily provided by a US-based tertiary education vendor called Ellucian. Ellucian has a limited CRM footprint within Oceania and it has been reported that there are challenges at VUW in obtaining timely support, engagement and ongoing guidance from the vendor. The relationship with Ellucian is considered to be transactional and not in partnership.

VUW has purchased a number of CRM modules from Ellucian. However at the time of writing this report, only CRM Recruit has been deployed. This purchase has incurred significant operational licensing cost with significantly less corresponding benefit.

Recruit is designed to facilitate the early stage of a student engagement lifecycle. Recruit's product offering is designed to identify, target, prospect and engage students for integrated admissions and to maximise conversion rates. Successful student recruitment journeys require the use of extensive automation and comprehensive workflow. The full suite of Recruit capabilities were not deployed at VUW, and some elements have recently been superseded through the acquisition of a new marketing application, Marketo.

VUW's operating model uses case management for key elements of the recruitment journey. However, Recruit does not feature native case management functionality, and this element has been configured in Dynamics during the implementation of the product. This has resulted in a non-standard configuration. VUW have not leveraged Ellucian's pre-packaged recruitment journey and taken full benefit of the vendor's solution.

VUW's CRM is built on an on premise version of Microsoft Dynamics 8.2. This version is currently in mainstream support until July 2020 and will require an Ellucian upgrade at that time to maintain their support requirements.

The on premise version of Dynamics does not offer the same alignment and upgrade path to features released on the online 365 platform, nor the ability to take advantage of 365 native integrations within Azure. This is an important consideration in respect of defining a longer term Cloud Strategy for VUW.

VUW does not have a consistent view of its data, its integration and systems processing environment. This has resulted in poor performance of CRM related data and high levels of data duplication. This issue adds to the complexity of the CRM support landscape

KPMG believes that the Digital Roadmap VUW provided for this review is missing key foundational activity. The Roadmap is not supported by an execution plan providing sequencing of value-driven change.

While there is evidence that supports thinking about the original CRM "vision", there is no connection between the original scoped requirements with key business decisions and outcomes. The project closure document does not include a traceability matrix or other evidence to support the outcomes envisioned.

3.1.1 Alignment to Industry Frameworks, Standards and CRM Roadmap

The current environment is built on premise. While this provides advantages for influencing and controlling the timing and scheduling of major updates and platform releases, however, this approach is now considered to be a legacy proposition. The overhead to coordinate upgrades are not required in SaaS offerings. The advantage of SaaS offerings is that the vendor maintains the platform and is able to routinely introduce new services as they become available.

CRM Recruit is built on Microsoft Dynamics 8.2 and Ellucian 5.1 on premise. The configurations implemented during the original deployment require re-work to enable portability of the platform to Ellucian Cloud or Microsoft Dynamics Online 365.

The current environment needs to be re-hosted by mid-2020 due to changes at Intergen. To receive support from Ellucian going forward, there is also a requirement to platform version upgrade in a similar timescale.

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VUW's unique modifications of CRM Recruit do conform to the way Ellucian manage their pre-configured product. The Microsoft case management is effectively "hidden" within the platform and therefore the customisations and deep configurations that VUW undertook will present challenges in migrating to Ellucian cloud.

An investigation would be needed determine the complexity and effort required to engineer out of the current system. It is possible that Ellucian could develop case management within their baseline Recruit product, but the vendor would need to be consulted to determine the likelihood of this.

Ellucian cloud leverages Amazon Web Services, and not Microsoft Dynamics 365 online. This means that Ellucian cannot consume the advancements on the 365 platform, particularly in respect of AI, machine learning and the full capabilities of the Microsoft Power platform (PowerBI, PowerApps and Flow).

Additionally any native integrations into Azure and the ability to consume SaaS capabilities such as Identity Management, Authentication, and Technology Resiliency cannot be comprehensively leveraged whilst the platform sits within AWS.

Online 365 product innovations are not released at the same cadence to on premise versions this means that VUW is missing out on potential product innovations.

Ellucian has stated that they have a close working relationship with Microsoft, however there is no roadmap to confirm Ellucian's migration to Azure at this time. KPMG believe that this would be a significant change and represents a challenge to Ellucian given the existing customer population within Ellucian cloud and the likely migration path and timescale required.

CRM is an important consideration in VUW's technology deployment model deliberations and a hosting strategy is required. This decision needs to be supported by operational design that is configured to support the optimal future state.

VUW's understanding of how CRM can support the student lifecycle is incomplete. There is misalignment between the desired student journey and the actual technology, data systems and processes to support the vision. The successful execution of the vision requires a common business architecture and significant effort to standardise processes across teams.

Recommendations

— A mapping exercise is required to match elements of key student outcomes and journeys to data and systems. VUW should establish the demarcation between marketing, relationship management and records management functions.

— A further determination is needed to ascertain if VUW's ways of working can conform to the Ellucian product and vendor vision.

— An assessment is needed to determine the desired CRM hosting strategy and operating model at VUW - (PaaS, SaaS, or Managed Service offerings)

— An audit and vendor cloud assessment should be completed to determine the precise facts in relation to any cloud migration approach.[1]

— Costs should be derived for the existing customisations within Dynamics to determine the effort to re-engineer.

— A decision is required on whether package or best of breed model is most appropriate. This decision will be most successful if it is based on a holistic and comprehensive assessment of end-to-end needs and outcomes, and not on the basis of singular or pre-existing processes.

— A further comprehensive evaluation should be undertaken once these steps are completed.

3.1.2   Extent and Impact of Customisation

The existing case management and workflow customisations within Dynamics are non-standard in respect of the Ellucian Recruit architecture. Whilst this configuration is supported, it is not in the product baseline. This position is not scalable, and resource intensive to maintain and support. These configurations mean that VUW is missing out on the opportunities of a migration to Dynamics 365 Online, in addition to the existing package benefits of the Ellucian product.

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[1] Ellucian have confirmed they would be able to conduct an audit as part of a Cloud assessment

KPMG understands that the vendor was consulted during the customisation process and supported the configuration at the time. However it is noted that this development is not standard, and VUW would be required to audit this environment to understand the complexity before proposing any migration to Ellucian cloud.

In relation to Ellucian Advise further analysis is required to determine if the product can replicate the case management customisations that were added to CRM Recruit. VUW needs to consult the vendor during this assessment. VUW should look to make a broader assessment as to whether Ellucian Advise will deliver against VUW's on-going needs.

More consideration is needed in respect of the functional-fit of CRM Recruit and additional marketing tools to deliver the full student recruitment journey. KPMG recognises that benefits are realised from the additional marketing tools, but note that the dis-benefits in other areas have not been accounted for. A more considered and comprehensive approach is required in the assessment of how solutions and products meet overall outcomes.

VUW need to assess how they will support the on-going data integrations. KPMG believes that it will be challenging to fully leverage the dataset in its current state, and that it should be mastered in CRM.

Recommendations

— As assessment is required on how CRM Recruit fits with additional marketing tools in delivering the full student recruitment journey.2

— Further analysis is required to determine if the Ellucian Advise product can replicate the case management customisations that have been developed in CRM Recruit. The vendor should be consulted in completing this assessment.

— Technical and timing constraints of the vendor should be established in respect of the CRM Roadmap. This would be best determined through an audit of the environment.

3.1.3   Key Technical and Process Constraints

The Education sector is faced with challenges in respect recruitment conversion rates, retention of students, useful and effective technology and the ability of their staff to adapt to change.

CRM solutions are designed to support and accelerate the maturity of student lifecycle management. However, the success of these solutions is dependent on pan-university strategies to provide clear functional processes, strong governance and performant technology and quality data to support good decision making.

VUW do not have clear demarcation of responsibilities and processes to support the success of their CRM. This is correlated to the poor performance of systems and inconsistent management of data. While this is related to the capability of their technology, it is also due to siloed behaviour and varying ways of working. KPMG believe that if VUW are to succeed in deploying CRM, a common data management and governance strategy is a pre-requisite. This means that VUW need to agree on common workflows that will support staff in delivering the student journey.

KPMG believes that that CRM related processes are non-standardised pan-organisation and have been developed to achieve local departmental or team needs. This has resulted in systems and data workarounds to compensate for dis-benefits of isolated decisions.

CRM does not contain the holistic dataset required to meet the objectives of the business case. There is no University wide data model to support standards for data integration and process flow. The result of this is poor data integrity and inconsistent process execution and student experience.

Duplication exists in respect of data integrations and daily effort is required to de-duplicate and improve systems integrity. External feeds of valuable prospecting data such as that from NZQA, are not able to be integrated and automations to leverage this data are not configured.

Overall, KPMG believes that VUW's current organisational design and process complexity will not achieve the envisioned outcomes for student relationship management.

Recommendations

— VUW must approach systems and data flows in the context of the complete student journey to avoid further conflicts in respect of data integrity and process work-arounds.

— VUW need to invest in the development of agreed workflow, with a data model to support this.

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2 KPMG have provided a stylised recruitment journey in Appendix C

— VUW would benefit from developing a comprehensive and agreed definition of the Recruitment story that incorporates the essential elements through the Search, Engage, and Apply phases

— A common Data Dictionary is needed.

3.1.4 Architecture and Data Governance

VUW does not have a common view of its data across its Enterprise. There is a poor general understanding of prospecting data and a limited, albeit, growing recognition of the value of external data sources. Enterprise and Data Architecture are immature, and a coherent and comprehensive data model for VUW could not be found. Data Governance processes and policies are not firmly established and monitored. This means that the demarcation of applications, systems and platforms in respect of data usage is unclear.

Governance in respect of data integration and the associated up-stream and down-stream implications is needed. The current approach has led to systems complexity and a high support and maintenance overhead. Extensive clean-up is needed within Banner and Recruit.

Evidence of an approach to strategic integration, including the development of an API framework, can be found within the Digital roadmap. This is supported by recognition of the requirement for a Digital Governance Group. KPMG believes that given the complexities of the current environment, a foundational programme of work to deliver aspects of a comprehensive Data Governance framework is needed.

KPMG believes that the delivery of a data governance strategy would be a significant piece of work for VUW and should be incorporated into the planning that underpins any further investment in digital or business domain driven design.

CRM does not feature prominently on the Digital Roadmap. Key capabilities such as workflow, automation and data integration cannot be evidenced in the context of CRM. Without these capabilities laid out clearly in Roadmap planning, CRM will not deliver the desired student outcomes

Recommendations

— A University Data Model is required to develop a common understanding of the VUW's data asset, and to facilitate informed decisions around process and applications usage.

— A Data Governance framework, including data owners and guidelines for the management enterprise data is required in order to leverage automation and reduce data duplication and reconciliation effort.

— The role of Enterprise Architecture should be re-evaluated. This should include clarification on the delivery model for Architecture Governance.

— Digital roadmap should be re-assessed in respect of the foundational elements of data integration, workflow and automation.

— A Data Dictionary should be developed to facilitate this process.

3.2 Business Architecture

3.2.1 Fit for Business Purpose

KPMG could not find full traceability of requirements in respect of the currently deployed solution. Substantial elements of the envisioned capabilities prescribed within the business case have not been delivered. Project closure documentation which references deliverables is incomplete and does not easily map back to the intended outcomes in the original business case.

The existing configuration is not scalable with the current level of workarounds and manual interventions. Automation would be difficult to achieve because of the immature workflow, incomplete data sets and an inconsistent use of data. Manual and labour intensive processes to reconcile this data are therefore required to continue until this position is remedied.

The demarcation between CRM and other up-stream and down-stream systems is not clear in terms of usage or data lineage. This makes it hard to determine where different phases of the student lifecycle sit in CRM, and how to manage data to support this journey.

CRM is not used across the entire organisation. This is a consequence of major segments of the staff population not being included in the system as well as missing and unsynchronised data. This presents challenges in providing a consistent student experience and results in the need to re-key previously captured data that is in other systems.

CRM Recruit does not meet requirements to support key elements of the recruitment process. CRM is not fulfilling a central role in respect of Victoria International at the pre-application stage of the lifecycle and valuable data could potentially be lost or inconsistent.

Student insights, a key objective of the business case has not been met. Another key element of CRM, case management has not been comprehensively delivered. It is noted that a pilot exercise of Ellucian Advise is underway, however results were not available at the time of this review.

Document management is an important and necessary capability in the provision of effective and timely student relationship management. VUW does not have an effective document management capability to support knowledge sharing and the management of key collateral that underpins the student experience. This makes it challenging for VUW to access documentation that supports CRM. It also means VUW are deficient in their ability to fulfil their compliance obligations for management and disposal of student data.

Future and current students are asked to provide the same data on multiple occasions because preferences and previous responses are inconsistently captured. This prevents VUW from being able to pre-provision registration and administration processes in advance of arrival and leads to start of year bottlenecks and an inconsistent experience. This approach also puts stress on technology systems, where peaks have to be accommodated for in terms of performance but averages are low. This model is inefficient and expensive when on premise.

During stakeholder interviews it was noted that online registration, a feature of the domestic student experience is not possible for International students. International students enrol manually due to current University policy in terms of the validation of international documentation and technology limitations. This delivery model is not mirrored across other Academic institutions within New Zealand.

Recommendations

— Prior to determining the direction for implementing technology, establishing a common way of working would enable greater traction of CRM across all student-centric activities.

— Agreement must be reached to simplify and standardise common processes, and these should be mandated using a common toolset in order to avoid inconsistent workflow.

— VUW would benefit from initially focusing on the Recruitment process to determine the process steps, data flows and system architecture necessary to rationalise this process. An underlying data model is needed to facilitate this activity.

— If VUW is to gain further value in the interim, an immediate strategy should be established for the following key areas:
  - Data integration approach
  - Data clean-up approach
  - Systems and usage guidance documentation and training

— A workflow and document management strategy is needed in the short-medium term.

3.2.2 Alignment to business and departmental processes

VUW's variable ways of working to deliver student outcomes reduce its ability to leverage the current package model CRM solution across the entire organisation. Complexity in respect of con-joint degrees and the large, flexible curriculum adds to the challenge of managing admissions and registrations workflow with the Ellucian architecture. The VUW processes differ significantly from the vision within the Ellucian product.

'Configurations' have been undertaken on a departmental level to enhance the Ellucian pre-configured processes. This has resulted in inconsistent delivery of CRM to local business units, where on a Faculty level CRM is used in different ways or not at all. Significant areas of VUW, such as academic staff who interact and with students regularly, do not have access to CRM.

Additional systems have been implemented to fill capability gaps without full consideration of data inputs and outputs. These decisions have caused unintended implications for other areas of the enterprise, resulting in follow-on process impacts, extensive data duplication and repetition of effort.

VUW is not capitalising on the Ellucian package and faces the choice of developing the product further to modify Ellucian's processes or re-designing aspects of VUW's organisation, processes and workflow.

Recommendations

— VUW should consider the potential benefits of delivering common processes through a student centre of excellence or shared service approach. This includes developing a common set of tools and way of working.

— The level of complexity in the curriculum options should be re-evaluated

— Registrations and admissions processes should be harmonised across International, Domestic and PhD in order to leverage efficiencies from a CRM solution.

3.2.3 Extent to which systems are leveraged

Six processes have been configured in CRM Recruit to deliver VUW business needs, however the full capabilities envisaged within the CRM business case have not been delivered. Large portions of the admissions and registrations journey are inconsistently delivered and key data and workflow elements within CRM are incomplete. Marketo was purchased on top of CRM and has superseded many parts of Recruit in delivering the recruitment journey. The results is unrealised expenses and inconsistencies in data and workflow that prevent VUW from meeting the initial objectives of CRM.

Major portions of case management are not configured and key aspects of student management, retention, engagement, tracking and intervention are missing. The platforms are not being leveraged to provide rich analytics that support student retention and academic outcome management. Data integrations are ad-hoc and poor data lineage and traceability further prevent these platforms from delivering student management. These desired outcomes are heavily featured in the original business case.

VUW's ability to leverage CRM and deliver support to students is reliant on staff interacting with the system. Usage reporting indicates that only a sub-set of staff have access to CRM, circa 250.

Recommendations

— We believe that the existing platform should not be extended to the additional population until results and recommendations are available from the CRM Advise pilot.

— An assessment is required as to whether the Ellucian suite of products is a good fit for VUW in supporting its ability to retain and case manage students.

— A decision is required to validate the roadmap options in terms of maintaining Ellucian architecture or taking a new direction.

3.3 Organisation

3.3.1 Organisational Design

Feedback gathered during stakeholder interviews was consistent in the perception that the existing organisational design results in siloed behaviour, fragmentation of processes, data duplication and inconsistent ways of working.

Significant differences in departmental and team processes result in an inconsistent and incomplete use of CRM to deliver the student journey. Gaps exist in VUW's ability to complete workflow that supports comprehensive recruitment and retention analytics.

KPMG believes that VUW should consider the ability of its current organisational design to support a complete student experience. This would include an assessment of whether a revised operating model, with modifications that centralise key processes, would increase consistency and an improved student experience. KPMG believe that by establishing common ways of working, this would enable technology automation and workflow, allow for workflow triggers to be developed and increase responsiveness to students.

A target Business Architecture is needed.

Recommendations

— Consideration must be given to the compatibility of organisation design and operating model in its effectiveness for delivering the envisioned student journey before any technology solution decision can be evaluated.

— VUW may wish to consider how its current organisational design could be modified to deliver a more consistent experience.

3.3.2 Delivery Model

KPMG has observed that VUW's relationship with the current vendor is transactional and not in partnership. It is also noted from the documents provided that the previous CRM delivery model was not outcome based. Ellucian's limited footprint and under concentration in the region presents on-going challenges around development and change support for VUW. Resourcing the required skillset with the relevant vendor expertise is difficult within the New Zealand market. Proximity and availability of resource during software development is paramount, particularly where prototyping and showcasing is required with business stakeholders and "fast fail" decisions needs to be made.

Generic Microsoft and Microsoft Dynamics skills are widely available within the region.

Recommendations

— VUW should re-assess the delivery and support capability of the vendor in this region, and formally capture risks.
— VUW should assess and look to leverage an outcome based sourcing model for significant areas of change in the future.
— VUW must consider the need for a much closer working relationship in any future engagement

4 Additional Observations

Whilst the scope of this report in terms of findings and recommendations is limited to section 3. We make the following additional observations for your consideration.

4.1 The Role of IT

A closer relationship between Business, IT and vendor partners is required. This would improve the mechanisms that facilitate and assert architectural stewardship and leadership within VUW and between VUW and third parties.

Evidence could not be found to illustrate a consistent and organisation wide Design Authority. Existing Architectural decision making is unclear, and it was observed from interviews that the relationship between Business and IT was combative. A value driven execution plan to underpin the Digital roadmap was not provided and it is unclear as to which elements are going to be funded. Key foundational aspects which would underpin the success of a Digital vision could not be seen in the Roadmap. No target state IT architecture was provided. The role of IT in respect of Technology Governance, the management of third party vendors and their decision making against contractual or commercial obligations and business outcomes is unclear. It is difficult to assess how the Digital roadmap delivers against a desired Business Architecture.

The roadmap alludes to a series of horizon views, whilst this is a convenient method to articulate a roadmap, significant areas of change are occurring off roadmap. If VUW wants to achieve consistent student outcomes as an organisation, a Blueprint should be created to deliver against a commonly defined series of technology and business transitional architecture states, with outcomes clearly articulated.

Considerations

— An overarching Architecture Governance Board should be established to govern technology decision making, data governance and control. This should include key vendors and business sponsors.
— Consideration should be given to the establishment of a Business Design Authority to own prioritisation and sequencing of investment in collaboration with an Architecture Governance Board.
— A Blueprint should be developed.

4.2 Requirements traceability

The mechanisms to trace architecture, solution design and technology delivery to business requirements are unclear.

Project closure documents indicating where requirements are met cannot be evidenced with traceability back to the business case.

Considerations

— Business outcomes should be documented, requirements as they are understood captured and extracted.
— Traceability mappings to the technology should be undertaken.
  Mappings to benefits realisation should be undertaken.

4.3 People and Culture

Previous mechanisms and tools implemented to deliver training and adoption of CRM were not successful. Departments and teams use technology products in different ways. Siloed teams and ways of working are impacting operational efficiency and student experience. KPMG observed that this was in part due to inadequate, inconsistent or absent guidance and materials.

Considerations

The design and delivery of a comprehensive training and adoption strategy is critical to the success of any solution delivery. Adoption strategies should include business focussed prototype solutions to encourage engagement and participation and to show value.

4.4   Vendor and Sourcing Strategy

Significant elements of the CRM business case have not been met. Previous 3rd party and vendor sourcing mechanisms have not achieved the outcome envisaged within the business case or vision. KPMG was not provided any commercial data in respect of this review, however in terms of a value-assessment against the original business case, KPMG believes that if a traceability exercise was undertaken, the resulting value realisation would be low.

Considerations

— A closer and more collaborative approach is required to delivery. Outcome based engagement teams are required. This should be reflected in any on-going 3rd party engagement approach, with an emphasis on prototype delivery and "fast fail"

— VUW would benefit from defining strategic delivery partnerships.

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Appendix A: Documentation Reviewed

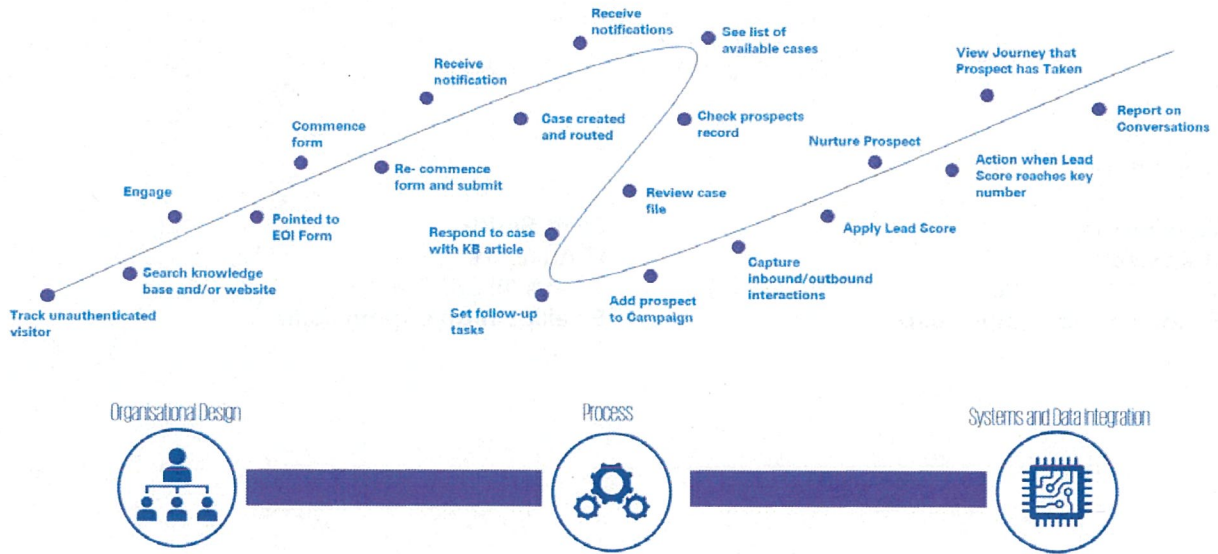| Document	Document
CRM Benefits Commentary Sept 2017	CRM Architectural Review Briefing
Draft Benefits Tracking Tool v0.2	CRM Benefits Commentary Sept 2016
Historical CRM Benefits	CRM from ITS View
SSRM Benefits Realisation Map	Roadmap for the CRM
Digital Roadmap	CRM 2018 and 2019 Project Close Out Report
Business Case for CRM RFP Redacted	CRM Architectural and User Review Interview Schedule
SSRM Phase 6 (Student CRM Project) Business Case Variation	

Appendix B: Interview Participants

We would like to thank the following people for their participation in this review:

Name	Role

Appendix C: Stylised Student Recruitment Journey

Stylised And Simplified Recruitment Journey

Track unauthenticated visitor · Engage · Search knowledge base and/or website · Pointed to EOI Form · Commence form · Re- commence form and submit · Receive notification · Respond to case with KB article · Set follow-up tasks · Receive notifications · Case created and routed · See list of available cases · Check prospects record · Review case file · Add prospect to Campaign · Capture inbound/outbound interactions · Nurture Prospect · Apply Lead Score · View Journey that Prospect has Taken · Action when Lead Score reaches key number · Report on Conversations

Organisational Design — Process — Systems and Data Integration

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