Service Excellence Programme – Student Administration and Support

Project Initiation Document

Exam Timetabling
(Project Code – SAS005)

1 Contents

2   Document Management

2.1   Document Owner(s)

Role	Name	Dates (start/end)
Project Manager	Jamie Thin	April 2017

2.2   Revision History

Revised by	Reason	Date	Version
Jamie Thin	Initiate	28-April 2017	0.1
Jamie Thin	Planning	2-May 2017	0.2
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2.3   Document Distribution

To (Name/Group)	Date	Version
Fraser Muir, Alison Ramsay, Joe Brown, Franck Bergeret, Scott Rosie, Stefan Kaempf, Suran Perera, Andrew Crossland, Paul Horrocks, Martin Jones, Alister Webb, Brian Denholm	23/05/17	V0.5
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Franck Bergeret, Chris Speed, Sally Priestley	06/06/17	V0.9

2.4   Document Approvals

Name/Group	Title	Date	Version
Fraser Muir	Project Sponsor	25/05/17	V0.5
Scott Rosie	Head of Timetabling and Examination Services	25/05/17	V0.5
Alison Ramsay	Examinations Officer	25/05/17	V0.5
Jamie Thin	Project Manager	25/05/17	V0.5
Joe Brown	Business Analyst	25/05/17	V0.5
Franck Bergeret	SEP Programme Mgr	25/05/17	V0.5

Stefan Kaempf	Head of Production Mgmt	25/05/17	V0.5
Suran Perera	Team leader Apps Mgmt	25/05/17	V0.5
Andrew Crossland	PM of SAC053	25/05/17	V0.5
Paul Horrocks	SSP Developer	25/05/17	V0.5
Martin Jones	IS Apps Developer	Not available	
Alister Webb	IS Apps Dev Tech lead	Not available	
Brian Denholm	Apps Mgmnt Support analyst	25/05/17	V0.5

3   Background

The University of Edinburgh has committed to a review of key professional service functions to ensure that we get the best from the sum of our efforts by building effective and efficient services. The initiative, which is known as the Service Excellence Programme, is being run by colleagues in Colleges, Schools and the Centre together in a joint approach.

http://www.ed.ac.uk/university-secretary-group/service-excellence-programme

One of the four sub-Programmes is focussed on **Student Administration & Support**. Work started in June 2016. A Current State Assessment Report was delivered to the Programme Board at the end of July 2016 and Outline Business Cases (OBC) at the end of October 2016.

http://www.ed.ac.uk/university-secretary-group/service-excellence-programme/projects/student-administration-support-programme

A high-level programme plan to deliver the indicated improvements via projects phased over 3-4 years was approved in principle in December 2016.   This document relates to the Outline Business case for Exam Timetabling.

This PID sets out how this project will be taken forward.

Work carried out under Service Excellence and noted in the Outline Business case summarised that:

- Most students do not have access to a full timetable for all the elements of their courses – including examinations and resits.
- Information about exams (e.g. title, time and place) is currently accessed via a tool based on the main University website and it is both difficult to use and not personalised.
- There is poor systems integration between Syllabus Plus (exam scheduling system) and EUCLID, which means that data must be moved manually between the systems which is time consuming and open to error.
- Staff are manually scheduling exams (involving large volumes of data) and not making use of the full range of the tools available within the exam scheduling software.
- There is inefficient and manual processing of special adjustments for exams (for Students who need extra provision (NEP) .
- Only a small number of staff at the University (with one expert user) are able to carry out the exam scheduling function putting the university at risk of being unable to deliver the service to students.

The ambition of this project is to deliver:

- For those students whose exams are currently scheduled (by the central exams team) , publish a personalised comprehensive examination/resit timetable to their Office 365 calendar.
- For those students whose exam type is not currently centrally scheduled (eg, 'class exams' and other in-course assessments) , an investigation into the barriers to the use of this service.
- An upgrade of the exam scheduling software and move it onto a resilient IT platform.
- Integration of the software with Student systems (EUCLID) to stop the requirement for the manual duplication of the data.
- A change to business processes / organisational structure by integrating the exam timetabling team within the larger Timetabling Unit. (This organisational change took effect in April 2017)
- A redefined process for exam scheduling which uses the software to the best of its capabilities using (where possible) the auto-scheduling functionality to reduce manual effort. This needs to include the special adjustments (NEP) data.

3.1 SEP Design Principles

The Service Excellence Board has set up a number of design principles to be borne in mind when designing and assessing solutions, these are:

- There will be clear differentiation between the "needs" and "wants" of users. Schools and units will only have local solutions where there is a local need;
- There will be simplification and consistency of approaches and tools where the need is the same;
- Schools, Colleges and Support Groups will work together using common mechanisms as default;
- Wherever possible, administrative workload will be reduced;
- Agility will be built into the processes themselves and the way in which they are updated;
- Appropriate digitisation should be carried out wherever it is cost-effective, acknowledging that a new system is not a "silver bullet";
- Data will be requested and entered only once, with users empowered to update systems directly; and
- We will balance the cost of service improvement with quality gains and time savings.

- In addition to SEP agreed principles, applicants and students are not required to understand and navigate the University's complex structures when accessing data and services.'

4 Objectives and Deliverables
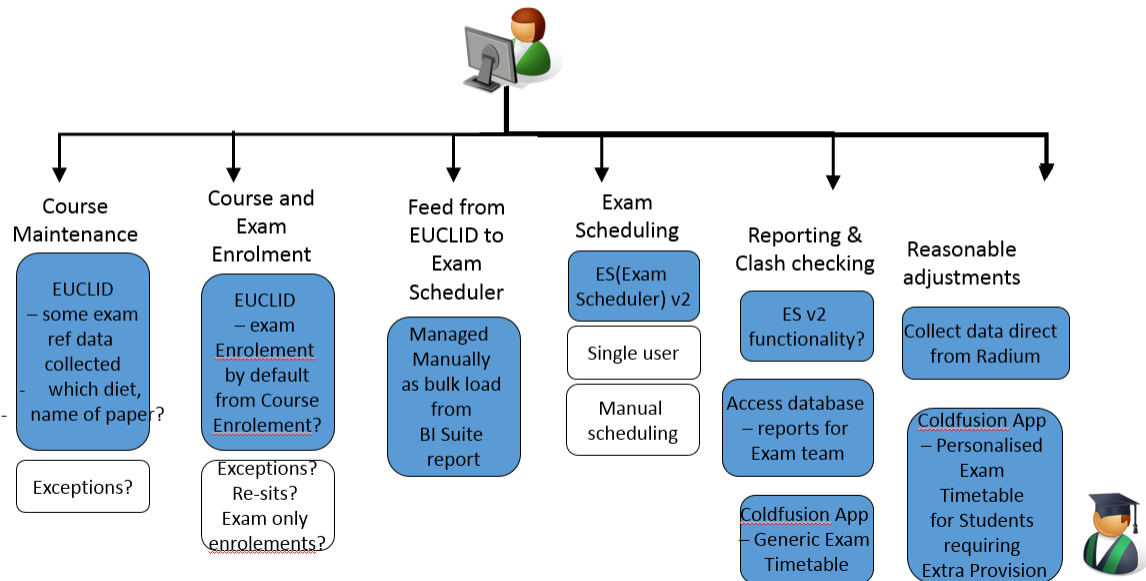
The aims of this project are to:

No.	Description	Priority	Owner
ID number	**Output / outcome / benefit / strategic objective**	**MoSCoW**	<who is responsible for realising the objective?> <who is responsible for producing the deliverable?>
O1	**Provide a comprehensive examination/resit timetable managed in Exam Scheduler v3.5.4 (For those students whose exams are already currently centrally scheduled).** **An upgrade of the exam scheduling software and associated reporting functionality and the move of these services onto a resilient IT platform.**	**Must**	**Alison Ramsay**
D1	Install Scientia Exam Scheduler on DEV , TEST and LIVE environments	Must	Jamie Thin
D2	Install Scientia Exam Scheduler standard reporting package (SSRS) , to provide equivalent reporting with no loss of service and to provide staff view of Exam Timetable (possibly via BI Suite). Evaluation of the SSRS reporting functionality against other reporting options including BI Suite	Must	Jamie Thin
D3	Essential enhancements to reports where gaps identified after analysis	Should	Jamie Thin
D4	Investigate BI Suite for delivery of reports in addition , or as alternative to SSRS , if there prove to be limitations with the SSRS package.	Should	Jamie Thin
O2	**Publish personalised exam timetable to each student via Office 365 calendar.**	**Must**	**Alison Ramsay**
D5	Build and test feed to Office 365 via existing Calsync tool	Must	Jamie Thin
O3	**For those students whose exam type is not currently centrally scheduled (Class exams) , an investigation into the barriers to the use of this service. – Transfer to SAS006?**	**Won't – Out of scope for SAS005 , transferred to SAS006**	**Joe Brown (as part of SAS006)**
	No deliverable for SAS005 – removed from scope		
O4	**Integration of the software with Student Systems (EUCLID) to stop the**	**Must**	**Jamie Thin**

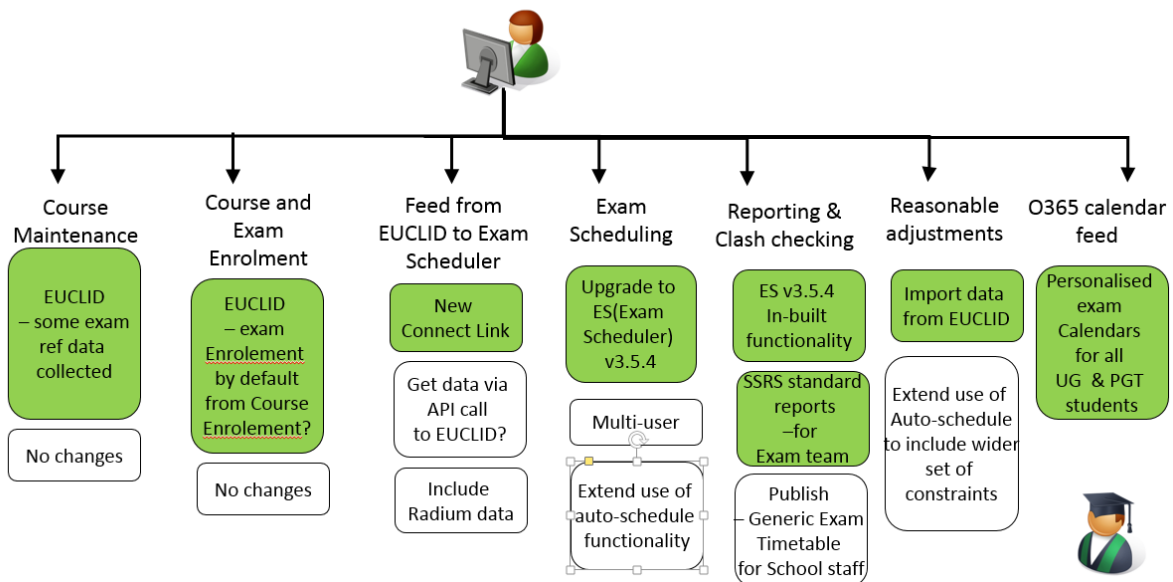|			
	requirement for the manual duplication of the data.		
D6	Install and Test Scientia Connect (with consultancy from Scientia Ltd)	Must	Scientia consultants
O5	**A change to business processes / organisational hierarchy by having exam timetabling carried out within the larger Timetabling Unit.**	**Must**	**Scott Rosie , Head of Timetabling**
	No deliverable for SAS005 – removed from scope – organisational change already delivered for USG Support group – with new combined 'Timetabling and Examination Services' team. Other new processes being embedded across CAHSS , and being piloted / investigated across CSCE and CMVM		
O6	**A redefined process for exam scheduling which uses the software to the best of its capabilities using (where possible) the auto-scheduling functionality to reduce manual effort. This needs to include the special adjustments data.**	**Must**	**Alison Ramsay**
D7	Use Scientia consultancy to extend use of Auto-scheduling	Must	Scientia Consultants
O7	**Communicate the changes to the User community , and consult with Staff and Student users to understand the impact of the changes on users**	**Must**	**Fraser Muir**
D8	A comprehensive Comms Plan to inform and explain the changes to the User Community	Must	Jamie Thin
O8	**Decommission redundant legacy systems**	**Must**	**Stefan Kaempf**
D9	Decommission legacy systems , once the new systems are fully delivered and the new service is embedded. It is expected that the legacy systems will be switched off when the new systems are LIVE – but they will not be decommissioned until the first running of the May 2018 exam diet has been completed – so that there is fall-back contingency in the event of any major issue on switching to Exam Scheduler v3.5.4. While this work is in scope of SAS005 , depending on timing – we may consider closing SAS005 after the May 2018 Deployment review, and then transferring some budget to a separate small project to decommission the redundant legacy systems	Must	Stefan Kaempf

	at a later date , rather than keep the whole SAS005 project open **Legacy systems to be decommissioned at a later date include:** Desktop install of ES v2 Access database used for Exam reporting VM with old DEV copy of ES v3 (from SAC022 project in 2014) Exam Timetable search from Study / Student Administration pages on University Website Coldfusion applications that run the search and personal Timetable for Students who need extra provision. ****These coldfusion search tools offer staff in schools another view of the Exam Timetabling data , and it is expected that equivalent views should be provided as part of the new system**** ****Some analysis required to understand the Staff use cases , and to prove the cost/ benefit case for building equivalent functionality**** None of these legacy systems will be plugged into the new Exam Timetable data in Exam Scheduler v3.5.4 – so they will become redundant after Jan 2018 – however typically business users may want to retain access to the legacy systems for a limited time period to allow comparison between old functionality and new functionality – and as a fall-back in a disaster recovery scenario		

Overview of Current State and To Be:

Exam Timetabling - Current State

Course Maintenance
- EUCLID – some exam ref data collected
- which diet, name of paper?
- Exceptions?

Course and Exam Enrolment
- EUCLID – exam Enrolement by default from Course Enrolement?
- Exceptions? Re-sits? Exam only enrolements?

Feed from EUCLID to Exam Scheduler
- Managed Manually as bulk load from BI Suite report

Exam Scheduling
- ES(Exam Scheduler) v2
- Single user
- Manual scheduling

Reporting & Clash checking
- ES v2 functionality?
- Access database – reports for Exam team
- Coldfusion App – Generic Exam Timetable

Reasonable adjustments
- Collect data direct from Radium
- Coldfusion App – Personalised Exam Timetable for Students requiring Extra Provision

Exam Timetabling – To Be

Course Maintenance
- EUCLID – some exam ref data collected
- No changes

Course and Exam Enrolment
- EUCLID – exam Enrolement by default from Course Enrolement?
- No changes

Feed from EUCLID to Exam Scheduler
- New Connect Link
- Get data via API call to EUCLID?
- Include Radium data

Exam Scheduling
- Upgrade to ES(Exam Scheduler) v3.5.4
- Multi-user
- Extend use of auto-schedule functionality

Reporting & Clash checking
- ES v3.5.4 In-built functionality
- SSRS standard reports –for Exam team
- Publish Generic Exam Timetable for School staff

Reasonable adjustments
- Import data from EUCLID
- Extend use of Auto-schedule to include wider set of constraints

O365 calendar feed
- Personalised exam Calendars for all UG & PGT students

5   Deliverables

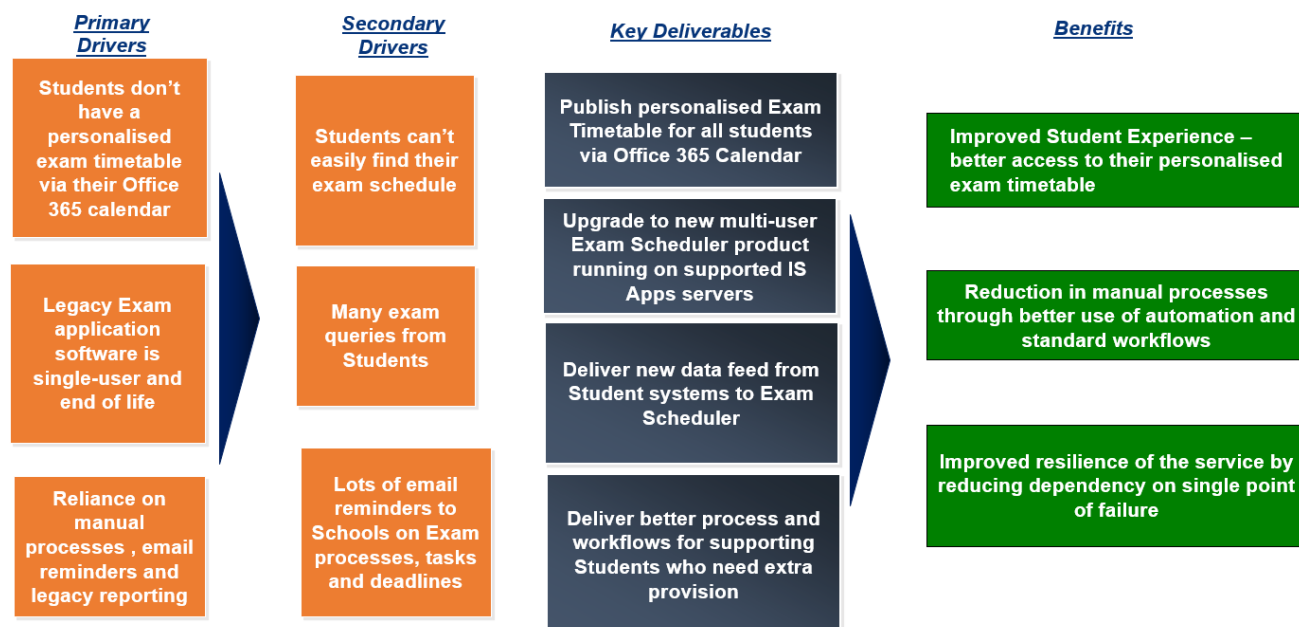## Key Drivers, Deliverables and Benefits

Fig 5.1 : Key Drivers

6   Scope

6.1   In Scope

The scope of the project is:

In Scope (as defined within the Outline Business case)

6.1.1 Scientia Exam Scheduler v3.5.4

The scope of the project only covers the exams and resit timetable events for students. It is assumed that these events will then be delivered alongside the rest of the students' timetables within each student's personalised Office 365 calendar

6.1.2 Interface from Student Systems (EUCLID) to Timetabling (via Scientia Connect)

The new interface between Student Systems and Timetabling will be one way, with no events being pulled back into EUCLID.

6.1.3 Office 365 feed (via Calsync)

The mechanism for the delivery of the events from the software to Office 365 has been developed elsewhere and this project will reuse this delivery mechanism. This new interface will still require some build and testing effort as it will be bringing data in from a new source (Exam Scheduler) for the first time.

New items added as part of Project initiation, some stakeholders not considered during outline business case

6.1.4 Data Extract or Report of Exam Timetable schedule to Digital Library to drive the collection of exam papers for the Online archive of Exam papers (as used by students as a revision aid)

6.1.5 Other existing consumers of Exam Timetabling data across the UoE – new requirements may be uncovered during analysis and priority will be considered by project team and project sponsor

6.2 Out of Scope

Areas that are out of scope of this project include:

1. **Changes to Exam Policy** Not a deliverable of the project – some Policy development may be necessary in parallel to the project – Alison Ramsay and Scott Rosie will lead on any Policy changes as part of business-as-usual work
2. **Data feed of exam timetabling data back from Exam Scheduler to the Teaching Timetable tool – Scientia Enterprise Timetabler.**
   Current process where rooms expected to be used for exams are block booked in the Teaching timetable will continue

3. **Scientia Exam Management system – cloud-hosted solution – not in scope**
   Once SAS005 is delivered – it is expected there could be demand for follow-up business-as-usual activities or follow-on project to embed the new Exam Timetabling processes and systems.

   Further Exam Timetabling work was investigated in another Outline business case for the Service Excellence programme ('running exams') but was not funded in the first round of Service Excellence projects.

   Future work could consider project work to implement the additional modules in the Scientia Exam Management cloud-hosted system for support of Paper submission workflows, Invigilator recruitment, training and allocation, and Exam session management. There is no funding or resources to progress this work at this point in time.

   Replacement of manual workflows with new workflows managed within the cloud-based Scientia Exam Management System (EMS)

   - Management of the exam paper lifecycle: submission, approval, printing and distribution
   - Self-service for invigilators: recording of availability, confirmation of attendance, etc.
   - Assessment of students' specific requirements and approval of extra/alternative provisions based on agreed needs
   - Exam session issue recording and reporting
   - Invigilator recruitment, assessment and training

4. **Overseas Resit Examination Service (for August re-sit diet) – Not in scope –** dealt with off-line , and this service is being reviewed and may be dropped in the future.
5. **Any requirement to share Exam Timetabling data with external bodies –** External examiners / External professional qualification awarding bodies **– Not in scope**
6. **Any impact of growth of computer-based exams** — **Not in scope** - any future additional requirements when scheduling exams in computer labs to run computer-based exams

7 Benefits Management

The following key benefits have been identified which will be measured.

Broadly the benefits can be summarised as :

1. Student Experience – the delivery of personalised view via their existing Timetable on my Phone service
2. Operational efficiencies – tangible resource savings in central exam support service
3. Staff Experience – improved exam timetable interface and access to exam reports

Full details of how these will be measured are included in the benefits log which is included in Appendix A.

Benefit	Measurement Approach	£	Increased efficiency and effectiveness	Enhanced user experience	Enhanced data quality	Increased process standardisation and simplification	Increased Compliance and reduced risk
Improved Student Experience – better access to their personalised exam timetable	Student journey mapping – before and after the changes – Qualitative feedback from touch points plus feedback via Class rep network	TBC	✓	✓			
Reduction in manual processes through better use of automation and standard workflows	Monitoring of changes in resource usage within Exams team – before and after the changes. Record number of temps recruited / staff from other areas transferred to Exams team during each exam diet to cope with peak demand Staff time saved inputting data and keying extra provision / reasonable adjustment requirements	£15k p.a.	✓		✓	✓	✓
Improved resilience of the service by reducing dependency on single point of failure	Monitoring of unplanned downtime – cost of recovering the service after failures, impact of unplanned failures on operations and service levels. During the project , responsibility for technical support of the live system will move from the local student systems team to IS Apps production management. This may make direct comparison costs before and after difficult. Current service is not fully supported , so support costs will	TBC	✓				✓

rise with more move to a fully supported model.							

8   Costs and Budgets

The overall costs and financial benefits for this project are noted below.

	Outline Business Case	PID
Implementation timeframe	12 months	15 months
Breakeven period	Not like for like SAS005 is only part of the SEP OBC for Timetabling. Benefits in SEP OBC have been revised down since it was first published	Breakeven point estimated at more than 5 years – need more detail from analysis stage. Currently costs expected to be lower than projected during OBC, however validation of benefits could also result in lower tangible benefits Any changes to value of costs and benefits will change the breakeven period
Total costs	**Total estimated 'one-off' cost = £197k** **Estimated ongoing cost p/a (steady state) = £51k**	**Total estimated 'one-off' cost in Year One = £160k** + Add IS apps service management costs **Estimated ongoing cost p.a. (steady state) =** VM annual costs = £10k p.a. IS Apps support costs = £16k p.a. Scientia annual maintenance = £6.48k p.a. **= £32.5k**
Total SEP Budget impact	**Over 5 years :** £197k + £51k for next 4 years = £197k + (4 x £27.5k) **= £401k**	**Over 5 years :** £160k + (4 x £32.5k) = £160 + £130k **= £290k provisional** + Add IS apps service management costs **– to be confirmed after SAS005 analysis stage**

		and after more detailed planning with the external supplier – Scientia Ltd. **Recommend that allocated budget is kept for SAS005 – until full costs are validated during analysis stage.**
Recurring benefit	Estimated net benefit p.a (steady state) = £4.2k in efficiency savings + not costed intangible benefits for students through better student experience Detail from OBC: £4.2k: The Exams Team estimated that 21 hours p/a is spent manually uploading data into Syllabus Plus due to lack of integration; between 84 and 105 hours p/a (~£2k to £2.6k based on a grade 7) was spent on scheduling large exams and 44 hours p/a (~£1k based on a grade 7) on keying disability related data. This equates to 149 to 170 hours equivalent to £3.6k to £4.2k (based on grade 7) Non costed- There would be an improvement in data quality and integrity with the reduction in manual intervention in data transfer; and increased data and service security and resilience by moving a core University function from a desk top machine to University servers.	Estimated net benefit p.a (steady state) = £15k + not costed intangible benefits for students through better student experience £15k of this net benefit has been confirmed by new estimate from the Timetabling and Examination Services team – saving of 74 days of Grade 5 effort p.a. = £15k saving of effort p.a. (74/190 working days = 0.4 FTE , rounded to 0.5 FTE) Non costed- There will be an improvement in data quality and integrity with the reduction in manual intervention in data transfer. There will be increased data and service security and resilience by moving a core University function from a desk top machine to IS Apps managed servers.

Estimate of days effort across 16/17 and 17/18

	16/17 Days	17/18 Days	Total Days
Build	114	152	266
User	18	42	60
Total days	**132**	**194**	**326**

Project costs are based on assumptions of staff time required to undertake the project as summarised below.

Each project has a different mix of resources; some resources are funded from current budgets and some resources are funded from the overall SEP Programme Budget. The total cost of the project and funding required for this project is noted below.

	Total Costs	Funded from BAU Budgets	Funded from SEP Budget
FY 16/17	£84.7k	Year 1 = Scientia AM £5,400 + VAT= £6.48k VMs annual cost = £10k p.a.	**External supplier costs Year 1** paid up-front to Scientia Ltd = £26,455 + VAT= £31.7k IS Apps project costs = £36.5k
FY 17/18	£103.3k	Year 2 = £5,400 + VAT= £6.48k VMs annual cost = £10k	**Rest of 'one-off' costs** +£14.7k +£6k +£17.5k = £38.2k IS Apps project costs = £48.6k
Total	**£188k**	**£33k**	**£155k**

The budget was approved for 2016/17 by the Service Excellence Board in January 2017. The funding required for FY 17/18 is being included within the planning round submission for the 17/18 Budget.

8.1   Project Roles Funding

Role	Name	Days	Funding
Project Manager	Jamie Thin	70	Funded through SEP
Business Analyst	Joe Brown, SSP BA	50	Funded through SEP
Developers (SSP)	Paul Horrocks	25	Funded through BAU
Developers (IS Apps)	Martin Jones (or tbc)	25	Funded through SEP
Technical Lead	Alister Webb	32	Funded through SEP
Technical operations	Stefan Kaempf, Suran Perera, Brian Denholm	34	Funded through SEP in year 1 to end of Project , then BAU
Testers	Alison Ramsay , Joe Brown and other business users and IS Apps Mgmnt	30	Funded through SEP & BAU
Training	Scientia Train the trainer & Exams team	TBC	Funded through BAU – with Train the trainer provided by Scientia Ltd (as part of SEP funded project implementation)
Total Build Days		266 (+)	
This resource will be monitored through time recording data.			

8.2   Project User Funding

Role	Name	Days	Funding
Project Sponsor	Fraser Muir	**20d**	Funded from BAU
Business Lead	Alison Ramsay	**40d**	Funded from BAU
School implementation	Mix of resource across schools	? tbc	Funded from BAU
Total User Resource		**60d +**	
[TBC if resource to be monitored through time recording data]			

9   Project Approach

This project will be constrained by implementation approach recommended by supplier Scientia – as much of the technical build and configuration work will be delivered by Scientia consultants.

The project is implementing a standard mature product – where there may only be limited options in configuration.

Due to these constraints – the project approach will not have perfect fit with the Service Excellence / KPMG recommended agile approach.

The main stages of the Service Excellence agile project approach are set out below mapped to the standard project stages and the KMPG methodology, which has been used to date. On approval of this PID this project will have completed initiation.
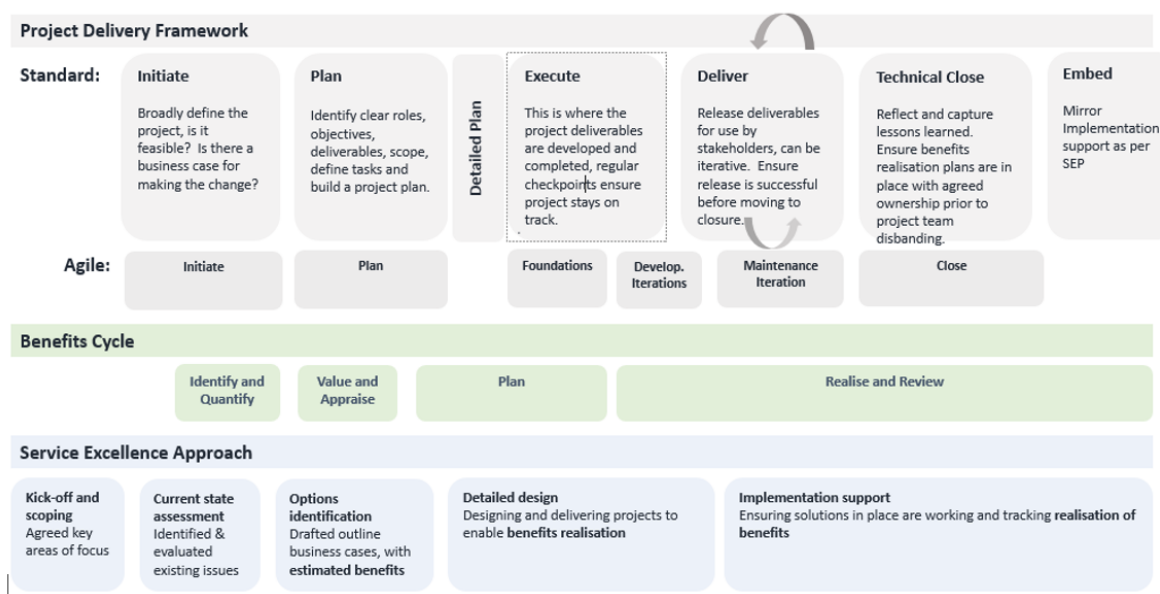
Fig 9.1 : Project Delivery Framework

10 Project Plan Milestones

An initial outline plan has been prepared. The outline project plan together with key planning assumptions is included in Appendix C. This is the baseline project plan.

Phases		Milestone
End of Project Initiation	PID approved- End of project initiation	26/05/17
End of Contract Management and Resource planning	Contract management with external Supplier – Scientia Ltd Detailed delivery plan, tasks with estimates and appropriate resource booking in place with Scientia and IS Apps and business partners.	23/06/17
End of Analysis	Gap analysis between the Scientia Exam Scheduler product and the UoE business requirements. Scope of Equality Impact Assessment to be agreed and completed	04/08/17
End of Infrastructure Design	Update Exam Scheduler Technical Architecture Design	12/06/17
End of Build	Order VMs	13/06/17
	Build DEV Exam Sched – IS Apps tasks	22/06/17
	Build TEST Exam Sched – IS Apps tasks	30/06/17
	Build LIVE Exam Sched – IS Apps tasks	28/07/17
	Scheduling of other build tasks tbc during resource planning	TBC
End of Integration testing		12/10/17
End of User Acceptance Testing		8/12/17
Go Live	Training completed for core Exams team and deployed to LIVE – to enable start of May 2018 diet tasks to start	15/01/18
	Decommission legacy systems – after May 2018 diet	31/07/2018
Embed	Benefit realisation	Review in July 2018 and July 2019 - at 2 months and then 14

		months after May 2018 exam diet
Closure	Implementation Deployment review and Completion report signed off	31/07/2018

11 Stakeholder Engagement

It is recognised that effective engagement with affected stakeholders is critical to ensure projects deliver valuable outputs which deliver benefits to the organisation including new ways of working.

Therefore, the SEP Programme is introducing new approaches around benefit, and change management and stakeholder engagement. This has a number of elements;

- Standard change management methodology will be used across the programme.   All project staff, business change leads, members of the Business Change Team and sponsors will receive appropriate training

This standard SEP approach will be modified to fit the requirements of the Exam Timetabling project , with approval of the Project Sponsor
The stakeholder engagement and communication plan is set out is appendix E.

12 Assumptions and Constraints

12.1 Assumptions

- There will be minimal change in the Exam policy required ;
- Senior management will support the project and provide business resources to get the changes implemented;
- Adequate resource will be available within the Business area, Schools, Information Systems Applications division and the external supplier Scientia Ltd.

12.2 Constraints

- Hard milestone dates for the Exam diet schedule
- Hard milestones / early deadlines for publishing Exam Timetable in advance of each Exam diet
- Deadlines by which the Exam team must be notified of Students who need extra provision
- Fixed date exams (approx. 200 across the year)
- Resource availability of key teams:
  - Scientia technical team to Install ESv3 and Connect in July and August 2017
  - Scientia integration team to build the Connector from Student Systems to ESv3 by end of Sept 2017
  - IS Apps Dev tech team and ITI to complete build of VMs for ESv3 and Connect
  - IS Apps management team to complete integration testing in Sept and Oct 2017

- Business user team in Timetabling and Examination Services team to complete Integration testing in Sept and Oct 2017
- Staff reps from Schools to complete UAT in Nov and Dec 2017

13 Dependencies and Impact

13.1 Dependencies

- Release of Exam Scheduler v3.5.4
- SAC053 – a related project which in parallel is moving the golden copy of Student disability and reasonable adjustment data from Radium to EUCLID

- Digital Transformation API project - SAS005 is dependent on the new Student API being available and delivering all required data items – if the Connector to get student data is to move to using the new API. If the Student API is not available – it won't be a showstopper , a new view will need to be created in EUGEX or another staging database, from where the data could be read for the feed to Exam Scheduler

13.2 Impact

Question : Is a formal Equality Impact Assessment required as part of SAS005?

Yes

It is expected that an Equality impact Assessment will be required for this project, as this project will change how disabled students will get access to their examination timetable, and may change parts of the internal process that creates the exam schedule.

The scope of this Assessment will be confirmed during the analysis stage by Service owner and business lead.

Any impact analysis when done, will follow guidance on the University website at
http://www.ed.ac.uk/equality-diversity/monitoring-statistics/impact-assessment

14 Risks

| |
|---|
| https://www.projects.ed.ac.uk/unpublished/project/sas005/risks |
| |
| 1Risk of disruption to May 2018 exam diet , when new systems are introduced |
| 2Risk of impact on delivery schedule if there are resource conflicts within business area, schools , Information services or within the external supplier (Scientia Ltd consultancy and training team) |
| 3Connect Interface development - dependency on other business-as-usual projects across Student Systems and Timetabling in DEV and TEST |

15 Governance and Assurance
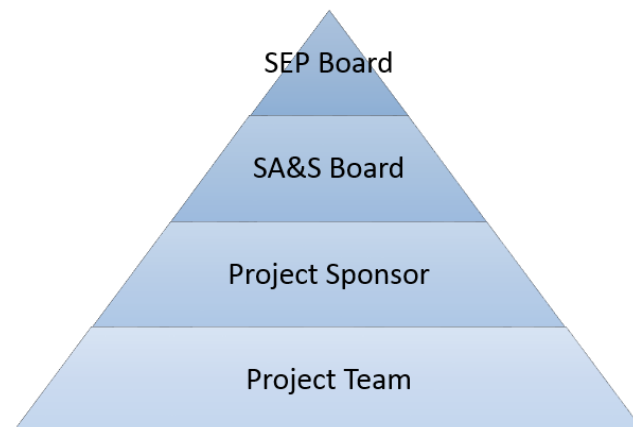
Fig 15.1 : Governance Structure

The Project will report to the Project Sponsor and Student Administration and Support Board. The Project Sponsor will attend the Student Administration and Support Board where required.

A number of controls are used to manage the overall SEP Programme
- Key milestones are tracked and managed on the overall programme delivery plan
- Fortnightly status reports are prepared and reviewed. These will be saved on the projects website.
- Number of key control logs managed throughout the project lifecycle including Risks, Issues, Assumptions and Dependencies (RAID) and benefits log
- Project plan and specific stakeholder engagement plan is maintained

- Changes to this scope will be managed through change control process and approved by the Sponsor and the Student Administration and Support Board
- Risks and issues will be escalated to either SEP Programme Lead or the Project Sponsor. If required these will then be escalated to the Student Administration and Support Board
- Changes to numbers of days less than 30 and to delivery timescales less than one month may be authorised by the Sponsor. All changes in scope will be taken to the Board or the programme sponsor by exception.
- Project QA via IS Applications governance

The overall Project and Programme Board governance structure are set out at Appendix B. The majority of project roles are documented at
https://www.wiki.ed.ac.uk/display/AProj/Agile+project+organisation

and the other project roles and responsibilities are in https://www.projects.ed.ac.uk/using-this-site/project-roles-responsibilities

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17 Appendix A – Benefits Measurement

Detailed Benefits Analysis for Exam Timetabling

Number of Students and Exams

Approx 30,000 students across 22 schools who take 3,000 exams across all exam diets

Number of Students who need extra provision

1,400 students who need extra provision at 4,100 exam sittings (in May 2017) .. and number is growing

Estimate of volume of emails about Exam arrangements sent to School staff by the Exams team as part of each Exam diet

Approx. 50 emails per Exam diet = 150 in the year

First draft of Exam Timetabling Benefits Log from Scott Rosie and Alison Ramsay

Exam Scheduler

Benefit Category	Key functionality	Benefit Description	Who Benefits?	Benefit Sponsor	Benefit Owner	Method of Measurement
increased efficiency & effectiveness	Database environment	Delivers more efficient scheduling management through a multi-user environment	Timetabling Unit	Scott Rosie	Alison Ramsay	TBC by Alison Ramsay or Scott Rosie
increased efficiency & effectiveness	Standard database data views	Does not require installation and ongoing maintenance of a Reporting Database	Timetabling Unit & IS Apps	Scott Rosie	Alison Ramsay	TBC by Alison Ramsay or Scott Rosie
increased efficiency & effectiveness	Open-ended database	Resource data can be carried-forward for use in future datasets	Timetabling Unit	Scott Rosie	Alison Ramsay	TBC by Alison Ramsay or Scott Rosie
increased efficiency & effectiveness	Open-ended database	Eliminates need for exam diets to be incorporated into standard timetabling "roll forward" project	Timetabling Unit	Scott Rosie	Alison Ramsay	TBC by Alison Ramsay or Scott Rosie
increased efficiency & effectiveness	Updated scheduling engine	Improved room scheduling efficiency, saving on invigilation costs	Timetabling Unit & Estates	Scott Rosie	Alison Ramsay	TBC by Alison Ramsay or Scott Rosie
increased efficiency & effectiveness	Automated seat allocation	Significant time saving on existing approach to seating plans	Timetabling Unit	Scott Rosie	Alison Ramsay	TBC by Alison Ramsay or Scott Rosie
increased efficiency & effectiveness	Automated Invigilator allocation	Significant time saving on existing manual approach	Timetabling Unit	Scott Rosie	Alison Ramsay	TBC by Alison Ramsay or Scott Rosie
increased efficiency & effectiveness	Automated special needs scheduling	manual approach for dealing with varied and complex individual needs, will also deliver individual timetables at the same stage for all students.	Timetabling Unit	Scott Rosie	Alison Ramsay	TBC by Alison Ramsay or Scott Rosie
increased efficiency & effectiveness	Embedded reporting functionality	Reduce existing reliance of creating and maintaining Access reports and spreadsheets	Timetabling Unit	Scott Rosie	Alison Ramsay	TBC by Alison Ramsay or Scott Rosie
enhanced user experience	Timetable publishing	Database can feed existing Calsync interface to push timetables to student Office365	Students	Gavin Douglas	Alex Carter	Feedback from Student class reps Are there any failure mesaurements - unplanned downtime - inconsistent data - % availability - TBC by Alison Ramsay, Scott Rosie & Alex Carter

Connect

Benefit Category	Key functionality	Benefit Description	Who Benefits?	Benefit Sponsor	Benefit Owner	Method of Measurement
increased efficiency & effectiveness	Next-generation SPDA	Differential data comparison allows for much quicker analysis of large datasets	Timetabling Unit	Scott Rosie	Scott Rosie	Speed of data transfer for updates
increased efficiency & effectiveness	Next-generation SPDA	Can bi-directionally interface to other application databases	Timetabling Unit	Scott Rosie	Scott Rosie	TBC - Scott Rosie
increased efficiency & effectiveness	Next-generation SPDA	easy user access via web-based Connect portal	Timetabling Unit & IS Apps	Scott Rosie	Scott Rosie	Comparision of Timetabling team and IS Apps team effort to manage existing feeds compared to comparable new feed
increased efficiency & effectiveness	Exam data interface	Will allow for automated interface of key student module and student special needs data - not currently available. Significant time saving on existing manual approach	Timetabling Unit	Scott Rosie	Scott Rosie	TBC - Alison Ramsay
increased efficiency & effectiveness	Exam data interface	Existing SPDA cannot interface with Exam Scheduler	Timetabling Unit	Scott Rosie	Scott Rosie	TBC - costs of manual workaround if no Connect feed built
increased efficiency & effectiveness	Replace legacy system	Implementation paves way for future required use of Connect by wider timtabling systems	Timetabling Unit & IS Apps	Scott Rosie	Scott Rosie	TBC - Scott Rosie

Estimate of savings of exam staff effort in days – per benefit per diet
(estimates from Scott Rosie and Alison Ramsay):

Exam Scheduler		effort saving - main diet	effort saving - resit diet	effort saving - fixed date
Key functionality	**Benefit Analysis**			
Database environment	Delivers more efficient scheduling management through a multi-user environment	2	1	0
Standard database data views	Does not require installation and ongoing maintenance of a Reporting Database			
Open-ended database	Resource data can be carried-forward for use in future datasets	1	0	0
	Eliminates need for exam diets to be incorporated into standard timetabling "roll forward" project			
Updated scheduling engine	Improved room scheduling efficiency, saving on invigilation costs	2	1	0
Automated seat allocation	Significant time saving on existing approach to seating plans	20	0	0
Automated Invigilator allocation	Significant time saving on existing manual approach	4	1	0
Automated special needs scheduling	Will eliminate the time-consuming manual approach for dealing with varied and complex individual needs, will also deliver individual timetables at the same stage for all students.	10	4	2
Embedded reporting functionality	Reduce existing reliance of creating and maintaining Access reports and spreadsheets	8	2	2
Timetable publishing	Database can feed existing Calsync interface to push timetables to student Office365	2	1	5
		49	10	9

Connect		effort saving – main diet (days)	effort saving – resit diet (days)	effort saving – fixed date
Key functionality	**Benefit Analysis**			
Next-generation SPDA	Differential data comparison allows for much quicker analysis of large datasets			
	Can bi-directionally interface to other application databases			
	easy user access via web-based Connect portal			
Exam data interface	Will allow for automated interface of key student module and student special needs data - not currently available. Significant time saving on existing manual approach	4	1	1
	Existing SPDA cannot interface with Exam Scheduler			
Replace legacy system	Implementation paves way for future required use of Connect by wider timtabling systems			
Total days		4	1	1

Exam Scheduler	68
Connect	6
Total saving in days per year	**74**
Total FTE committed to current operation	3.8
average grade commitment	grade 5
Current FTE saving estimate	0.5

18 Appendix B – Governance Structure
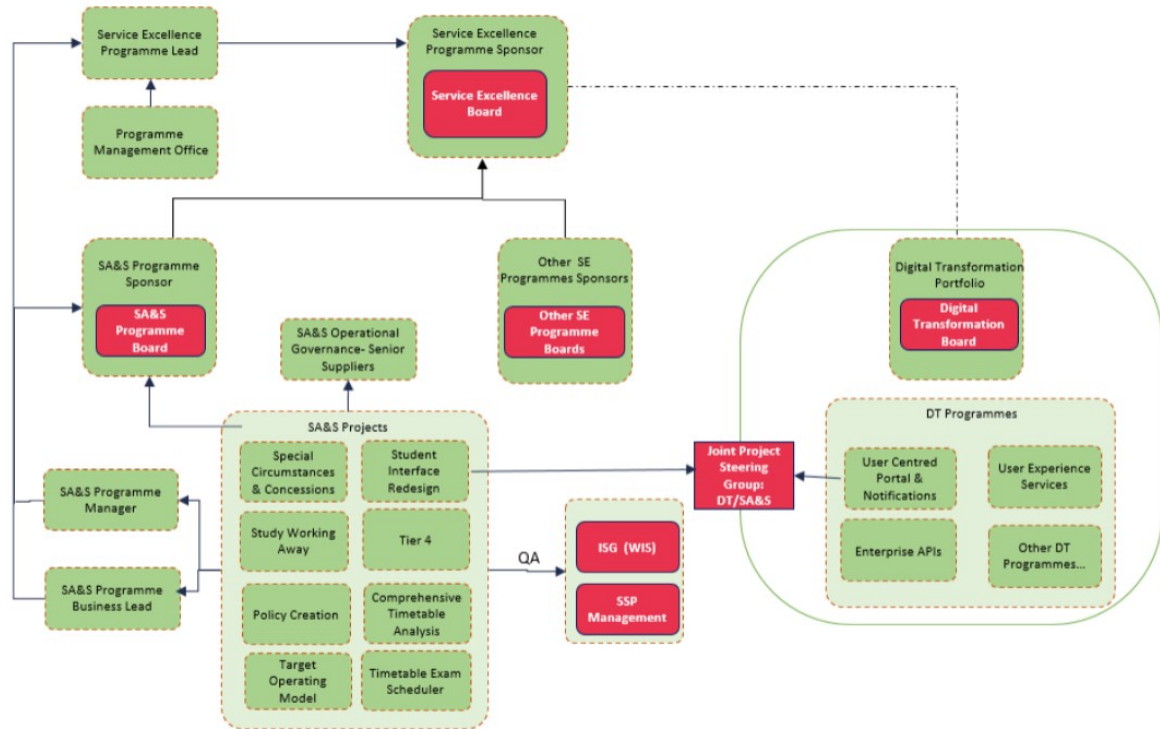
19 Appendix C - Detailed Project Plan

	ⓘ	Task Mode	Task Name	Duration	Start	Finish	Predecessors
0			⊟ SAS005 Plan	199.57 days	Thu 06/04/17	Wed 06/12/17	
1			⊟ Start of Planning	64.71 days?	Thu 06/04/17	Fri 23/06/17	
2			Agree Scope of Scientia work / product licences	1 day?	Thu 06/04/17	Thu 06/04/17	
3			Book IS Apps Dev tech resources	0 days	Mon 17/04/17	Mon 17/04/17	
4			Draft PID	1 day?	Fri 19/05/17	Fri 19/05/17	
5	✓		PID approved by Sponsor and Project Team	0 days	Fri 26/05/17	Fri 26/05/17	
6			Prepare Plan / Schedule Tasks	20 days	Wed 31/05/17	Fri 23/06/17	
7			Prepare Comms Plan	10 days	Wed 31/05/17	Mon 12/06/17	
8			Submit End of Planning to WIS	0 days	Fri 23/06/17	Fri 23/06/17	
9			End of Planning	0 days	Fri 23/06/17	Fri 23/06/17	6,7
10			⊟ Start of Supplier Engagement / Contract and Planning	40.57 days	Fri 05/05/17	Fri 23/06/17	
11	✓	📌	Get Quote	1 day	Fri 05/05/17	Fri 05/05/17	
12	✓	📌	Raise PO to Scientia for ESv3 and Connect	1 day	Mon 15/05/17	Mon 15/05/17	
13			Update Scientia Contract - review existing Terms and Conditions	20 days	Wed 31/05/17	Fri 23/06/17	
14			Agree contractual tasks with Scientia	20 days	Wed 31/05/17	Fri 23/06/17	
15	✓		Book Kick-off mtg / Planning / start of analysis mtg with Scientia Consultant	0 days	Wed 31/05/17	Wed 31/05/17	
16			Book Scientia Tech resources	10 days	Wed 31/05/17	Mon 12/06/17	
17			End of Supplier Engagement / Contract and Planning	0 days	Fri 23/06/17	Fri 23/06/17	16,14

	ⓘ	Task Mode	Task Name	Duration	Start	Finish	Predecessors
18		📌	⊟ Start of Comms / User Engagement activties	60 days	Mon 12/06/17	Wed 23/08/17	
19			Student engagement - initiated by Student intern?	60 days	Mon 12/06/17	Wed 23/08/17	
20			School Staff engagement activities - led by Alison Ramsay?	60 days	Mon 12/06/17	Wed 23/08/17	
21			School staff briefings	2 days	Mon 09/10/17	Tue 10/10/17	
22			prep and training for UAT	5 days	Mon 16/10/17	Fri 20/10/17	
23			End of Comms / User Engagement activities	0 days	Wed 23/08/17	Wed 23/08/17	19,20
24			⊟ Start of Analysis	55.43 days	Fri 26/05/17	Wed 02/08/17	
25		📌	Gap Analysis - Reporting	20 days	Fri 26/05/17	Tue 20/06/17	5
26		📌	Gap analysis - Searchable Exam Timetable	10 days	Tue 20/06/17	Mon 03/07/17	25
27			**Scientia Consultancy - planning mtg on-site**	3 days	Tue 20/06/17	Thu 22/06/17	5
28			Gap Analysis - upgrading from ESv2 to ES v3.5.4	5 days	Thu 22/06/17	Thu 29/06/17	27
29			Define scope of EQIA	5 days	Thu 22/06/17	Thu 29/06/17	27
30			Complete EQIA	10 days	Thu 29/06/17	Tue 11/07/17	29
31			Other Analysis tasks	18 days	Tue 11/07/17	Wed 02/08/17	30
32			End of Analysis	0 days	Wed 02/08/17	Wed 02/08/17	31

	ⓘ	Task Mode	Task Name	Duration	Start	Finish	Predecessors
33		📌	⊟ **Start of Build**	**1 day?**	**Mon 12/06/17**	**Mon 12/06/17**	
34		⇨	Technical Design - Update TAD	1 day	Mon 12/06/17	Mon 12/06/17	
35		⇨	Order VMs and confirm costs	1 day	Tue 13/06/17	Tue 13/06/17	34
36		⇨	Build DEV - App and DB Server	10 days	Mon 12/06/17	Thu 22/06/17	
37		📌	Build TEST - App and DB server	5 days	Mon 26/06/17	Fri 30/06/17	
38		📌	Build LIVE - App and DB server	5 days	Mon 24/07/17	Fri 28/07/17	
39	▦	⇨	Scientia install ES on DEV - TBC	1 day	Mon 26/06/17	Mon 26/06/17	
40	▦	⇨	Scientia install ES on TEST - TBC	1 day	Mon 03/07/17	Mon 03/07/17	
41	▦	⇨	Scientia install ES on LIVE - TBC	1 day	Tue 01/08/17	Tue 01/08/17	
42		⇨	Scientia ES Configuration tasks	20 days	Tue 27/06/17	Thu 20/07/17	39
43	▦	⇨	Build Connect Infrastructure	10 days	Mon 07/08/17	Thu 17/08/17	
44		⇨	Scientia Install Connect software	5 days	Thu 17/08/17	Thu 24/08/17	43
45		⇨	Scientia Build Connect configuration package - pull data from Student Systems API	30 days	Thu 24/08/17	Fri 29/09/17	44
46		⇨	Build acceptance sign-off	0 days	Fri 29/09/17	Fri 29/09/17	45
47		⇨	**End of Build**	0 days	Fri 29/09/17	Fri 29/09/17	45
48		⇨	⊟ **Start of Testing**	**55 days**	**Fri 29/09/17**	**Wed 06/12/17**	
49		⇨	ES Application integration testing	10 days	Fri 29/09/17	Thu 12/10/17	47
50		⇨	Connect feed - integration testing	10 days	Fri 29/09/17	Thu 12/10/17	47
51		⇨	User Acceptance Testing	30 days	Tue 31/10/17	Wed 06/12/17	50FS+15 days
52		⇨	UAT Acceptance sign-off	0 days	Wed 06/12/17	Wed 06/12/17	51
53		⇨	**End of Testing**	0 days	Wed 06/12/17	Wed 06/12/17	52

Project Plan Assumptions:

The initial project plan is based on the following assumptions:

1. Dependency on IS Apps resource bookings and bookings for Scientia consultants (tbc)
2. Availablity of various teams to support integration testing and UAT

Planning constraints:

1. Need outline plan and estimate from Scientia Ltd to understand work breakdown structure and estimate of effort and elapsed time to do each task

20 Appendix E - Detailed Stakeholder Engagement Plan

A detailed Comms Plan will be developed during the Analysis stage.

The approach agreed with the Business lead, Service owner, Project Sponsor and leads in SEP is that existing user networks will be used , rather than creating new User groups specific for SAS005

There is an existing network of Exam and Timetabling staff contacts in Schools and Support Groups

It is proposed that a variety of comms channels are used – Yammer group, email distribution list, workshops and project briefings. As a lot of Exams BAU comms are already sent by email – email will likely be an ineffective comms channel for this project.

Frequency of User engagement to be agreed during analysis stage.

Stakeholder Engagement Plan –

Project name			SAS005 - Exam Timetabler						
2. Stakeholder plan									
Stakeholder Analysis, Communications and Engagement Plan. Guidance provided by selecting cells									
Stakeholder	**Role**	**Recommended Approach**	**Change Impact**	**Interests**	**Purpose of communication**	**Method**	**Frequency**	**Responsibility**	**Timescale**
Fraser Muir	Project Sponsor / CIO CAHSS	Key Players - Strong Buy-In	Sponsor likely to have strong input to the PID, Comms plan , User engagement , Roll-out plan and Benefits realisation	Overall responsibility for the project	Full awareness of progress, obstacles and outcomes	e-mail, telephone plus meetings as required	TBC - Fortnightly meeting, and as required?	Project Manager	Fortnightly
Alison Ramsay	Examinations Officer	Key Players - Strong Buy-In	Business Lead - will lead implementation within her Exams team	Responsible for transition to business-as-usual service	Full awareness of progress, obstacles and outcomes	Project team meetings, e-mail, telephone	Fortnightly meeting, and as required	Project Manager	Fortnightly
Scott Rosie	Head of Timetabling and Examination Services	Key Players - Strong Buy-In	Senior Business Lead - Service owner for Timetabling and Examination services	Responsible for understanding inputs, drivers, resources and implications.	Full awareness of progress, obstacles and outcomes	Regular meetings, e-mail, telephone	Fortnightly meeting, and as required	Project Manager	Fortnightly
Franck Bergeret	SEP SA&S Programme Manager	Key Players - Strong Buy-In	Programme Management need to keep up to date with progress in relation to risks and	Responsible for understanding inputs, drivers, resources and implications.	Full awareness of progress, obstacles and outcomes	Regular meetings, e-mail, telephone	Fortnightly meeting, and as required	Project Manager	Fortnightly
Joe Brown	SAS005 and SAS006 - Business Analyst	Active Consultation	Business Analyst responsible for business analysis , mapping business requirements to	Responsible for understanding inputs, drivers, resources and implications.	Full awareness of progress, obstacles and outcomes	Regular meetings, e-mail, telephone	Fortnightly meeting, and as required	Project Manager	Fortnightly
Stefan Kaempf	Senior Supplier IS / Head of Production Management	Active Consultation							
Alex Carter	Head of Service Management	Active Consultation							
Disability Office		Active Consultation	Definition and clarification of Comprehensive Timetable.	Core user group need to understand project roadmap	Awareness of progress and outcomes	Meetings and e-mails	As required on achievement of milestones	Project Manager	As required
Andrew Crossland	PM for Radium project	Active Consultation	Definition and clarification of Comprehensive Timetable.	Core user group need to understand project roadmap	Awareness of progress and outcomes	Meetings and e-mails	As required on achievement of milestones	Project Manager	As required
Karen Osterburg	Student Systems	Active Consultation	Definition and clarification of Comprehensive Timetable.	Core user group need to understand project roadmap	Awareness of progress and outcomes	Meetings and e-mails	As required on achievement of milestones	Project Manager	As required
Max Holden	Scientia Account Manager	Key Players - Strong Buy-In							
Natalie Bruce	Scientia Services and Implementation Manager	Key Players - Strong Buy-In							

Project name		SAS005 - Exam Timetabler							

2. Stakeholder plan

Stakeholder Analysis, Communications and Engagement Plan. Guidance provided by selecting cells

Stakeholder	Role	Recommended Approach	Change Impact	Interests	Purpose of communication	Method	Frequency	Responsibility	Timescale
School Timetabling Staff		Active Consultation	Definition and clarification of Comprehensive Timetable.	Core user group need to understand project roadmap	Awareness of progress and outcomes	Meetings and e-mails	As required on achievement of milestones	Project Manager	As required
Student Representatives		Active Consultation	Definition and clarification of Comprehensive Timetable.	Core user group need to understand project roadmap	Awareness of progress and outcomes	Meetings and e-mails	As required on achievement of milestones	Project Manager	As required
TTU Team		Active Consultation	Core user group need to understand project roadmap	Core user group need to understand project roadmap	Awareness of progress and outcomes	Meetings and e-mails	As required on achievement of milestones	Project Manager	As required
ISG Dev services		Active Consultation	IT Resource likely to have strong input to the solution(s)	Responsible for understanding inputs, drivers, resources and implications.	Full awareness of progress, obstacles and outcomes	Regular meetings, e-mail, telephone	Fortnightly meeting, and as required	Project Manager	Fortnightly
ISG Production Management		Active Consultation							
Enterprise Architecture - Wilburt Kraan		Active Consultation	IT Resource likely to have strong input to the solution(s)	Responsible for data architure within the Enterprise Architecture team.	Full awareness of progress, obstacles and outcomes	Regular meetings, e-mail, telephone	Fortnightly meeting, and as required	Project Manager	Fortnightly

Student Administration – business calendar

Where Exam Timetabling fits in the business calendar , and dependencies on other business processes and change initiatives across Student Administration and Support