

Informatics Computing Plan 2021

Version: 2021-02-10

Programme name	COMPUTE
Programme Purpose	Sustainably address increasing demand for compute within School
Lead	Alastair Scobie
Description	There is increasing demand from both research and teaching for compute resources, particularly GPU based. There is limited scope for locating additional equipment within the School's server rooms due to limits on cooling, space and power. There is evidence that siloed ownership has resulted in poor overall utilisation of the School's combined GPU resources.
Benefits	Directly benefits both teaching and research
Goals	<ol style="list-style-type: none"> 1. Form a short-lived working group to consider options for addressing the immediate capacity issues in the Forum server rooms, and to produce a plan of action to be agreed by Computing Strategy Group and Strategy Committee. 2. Implement those concrete actions identified by the above plan 3. Produce a plan, agreed by Strategy Committee, for addressing the increasing demand for compute, particularly GPUS, within the School 4. Implement those concrete actions identified by the above plan 5. Develop a procurement framework to procure GPU servers, with University Procurement, to improve procurement compliance, reduce purchase costs and reduce time to procure 6. Commission a report on how the sustainability of the Forum server rooms could be improved
Programme name	DATAMANAGE
Programme Purpose	Improve data management processes
Lead	Craig Strachan
Description	Produce integrated systems, processes and resources enabling data owners within the School to make best use of their data and providing the School with better oversight of its data estate. Pay particular heed to the requirements of research related data, and its users, including students conducting research
Benefits	More efficient use and management of School data resources. Increased assurance that the storage and processing of data within the School meets all legal, ethical and funding requirements.
Goals	<ol style="list-style-type: none"> 1. Produce a data asset register and develop processes for populating and maintaining this register, for example via data management plans 2. Produce a School policy on Data Management Plans, providing whatever support and resources are needed to support this plan once approved. 3. Complete work to separate backup streams for medium/high-risk (MHR) and non-MHR data to meet differing retention policies 4. Consider how best to make use of IS RDM offerings, producing use case guidance 5. Complete academic staff data security exercise and review and act on lessons learned.

Programme name	SEP
Programme Purpose	Engage with Service Excellent Programme
Lead	Tim Colles
Description	The first deliverables of the Service Excellence Programme - HR, Finance and Procurement - will roll out in 2020. This has implications for both systems (e.g. data feeds) and processes used by the School.
Benefits	This programme will not directly benefit either teaching or research.
Goals	<ol style="list-style-type: none"> 1. Identify and implement the changes required to systems and processes necessitated by the SEP rollout to Payroll and Guaranteed Hours 2. Identify and implement the changes required to systems and processes necessitated by the SEP rollout for Procurement 3. Identify and implement the changes required to systems and processes necessitated by the SEP rollouts for Finance

Programme name	EDLAN
Programme Purpose	The replacement of the University, and School, data network
Lead	George Ross
Description	The University data network, EdLAN, is being completely refreshed over 2020 and 2021. The School currently runs its own data network and treats EdLAN effectively as an ISP. It is likely that, as part of the EdLAN refresh, ISG will take over some or all of the responsibility for the School's network.
Benefits	Other than general stability improvements to EdLAN, this programme will not directly benefit either teaching or research. It is possible that it may result in reduced School costs (of both staffing and network kit replacement)
Goals	<ol style="list-style-type: none"> 1. Evaluate the various management models and produce options proposal for discussion at Strategy Committee 2. Produce a Memorandum of Understanding to be agreed with Strategy Committee and ISG, detailing the management responsibilities for the various aspects of the School's network 3. Identify any required changes to the School's computing infrastructure to accommodate the rollout of the refreshed EdLAN 4. Implement any required changes to the School's computing infrastructure to accommodate the rollout of the refreshed EdLAN 5. Rollout the refreshed EdLAN across the School

Programme name	DICEDESKTOP
Programme Purpose	Update the DICE desktop platform to Ubuntu
Lead	Alastair Scobie
Description	The current DICE platform is based on Scientific Linux 7 (SL7), which in turn is based on Redhat 7. The age of SL7 is causing major problems for both teaching and research - it is increasingly difficult to install modern versions of software on top of SL7. We could have re-based DICE on a more recent Linux distribution based on Redhat, but concluded that re-basing on Ubuntu would give us both a more modern and more frequently updated platform.
Benefits	This initial rollout, to DICE teaching desktops, is targeted at teaching - but it is expected that DICE Ubuntu will be extended to all desktops and compute servers, hence benefiting research.
Goals	<ol style="list-style-type: none"> 1. Develop an LCFG managed DICE desktop platform based on Ubuntu 2. Deliver all teaching software for 20/21 AY on DICE Ubuntu desktop 3. Roll out DICE Ubuntu desktop to teaching labs 4. Extend DICE Ubuntu platform to support GPU servers

Programme name	PGRDEVICES
Programme Purpose	The provision of personal computing devices to research postgraduates from AY 2021 onwards.
Lead	Alastair Scobie
Description	The School will provide the majority of 1 st year research postgraduates (PGR) with hot desking facilities rather than individual office desks, from AY 2021 onwards. This means that such students can no longer be issued with their own individual desktop. This programme will develop an alternative approach for meeting the personal computing requirements of PGR students.
Benefits	This programme will help the School in addressing its pressing accommodation crisis.
Goals	<ol style="list-style-type: none"> 1. Identify requirements for PGR personal computing 2. Produce an options paper for discussion at Computing Strategy Group 3. Produce a plan, to be agreed with CSG and Strategy Committee 4. Implement the agreed plan

Programme name	FLEXIBLEWORKING
Programme Purpose	To plan and implement any changes identified by the School's "Future Working Group"
Lead	TBD
Description	TBD once Future Working Group has proposed changes.
Benefits	
Goals	

Additional activities

Theme	Activity
Security	Convert all web sites from HTTP to HTTPS
Security	Implement agreed steps to improve security of system administrator accounts
Security	Produce user security training materials
Governance	Perform audit of School's web "estate", identifying risks and issues
Services	Review whether the existing network file system is still appropriate for School's requirements and identify possible alternatives
Facilities	Update the AV facilities in the Informatics Forum
Platform	Consider whether to upgrade DICE server platform to RHEL 8 or Ubuntu
Teaching	Reduce the number of submissions systems to the minimum required