

Centralised IT and Research. Are they enemies or just friends who need counselling?

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ABSTRACT

IT departments exist to support their University. The University has two masters: Teaching and Research.

Supporting teaching from centralised IT is common practice and when the pros and cons are considered, teaching in the most part benefits from this arrangement. Centralised IT support for research administration applications such as grant submissions or animal management is also typical.

Supporting academics with the actual act of research, however, is not so straight forward. It presents unique challenges for IT. Research computing is a volatile swiftly evolving environment that does not lend itself naturally to annual budgets, stable technology standards and project methodologies which are the staples of IT departments.

How then can University Research leverage centralised IT support which offers funding and resources on a scale which can typically only be achieved by larger, dedicated research centres? The type of support for which early career academics and doctoral students alike would love to have without having to dip into their limited grant funds. The type of facilities that would free up research grant funds to be spent on people rather than hardware.

Research and Centralised IT need to be friends for the betterment of the University and academics. Pull up a couch and let's see how that makes them feel about that.

EXTENDED ABSTRACT

It is the norm for a University's IT division to be administration and application focused. They abound with budgeting timetables, technology standards, change processes and project methodologies.

Then along comes a post doc who just wants to buy a computer and have it running by next week. They don't have business requirements. They look at you strange when you ask about release management and operational support and really don't understand why the hell they would need a CAB.

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Learning Management Systems, such as Blackboard and Moodle, work well in a conservative and process driven IT environment. This is true for finance, HR and student administration systems. Even Research administration systems like grant management comfortably function in these environments. These applications need to evolve but they have a strong emphasis on being stable and available, in some cases 24hrs a day every day. Really no different to an IT department in most organisations whether they be a University or a furniture manufacturer.

The same conservative approaches which achieve this stability are the enemy of fly by the seat of your pants computing that is often required for undertaking research. There will not be a well defined requirement specification. Requirements can quiet often significantly change from the conception of the hypothesis to the analysis of the data. What initially may look like a standard number crunching exercise in SAS or Matlab can evolve into custom written modelling code to be run on a grid (and vice versa). They cannot wait for an IT project methodology that will take twelve months to run through development and test environments before it can be placed into production.

How then can a centralised IT department serve its other master, Research?

This session will present a number of strategies that are intended to gain the benefits of the cost efficiencies and some of the stability of a centralised IT division while going someway in delivering the dynamic and often very specific needs of research.

The approach to be presented involves:

1. **A coherent voice from academics** – HR and Finance divisions have been dealing with IT divisions for decades. They know the budgeting cycles and the nuances of business cases and having their project prioritised. Student and Research administration groups have learnt well from them. Research academics on the other hand prioritise their time on their academic pursuits and grant submissions. They present as a number of discontinuous individuals with competing requirements. This arrangement cannot compete with the coordinated approach of the rest of the University. A solid community of practice well represented by academics and reporting to the DVC-R is needed. Senior representation and buy in from IT and the Library are also required.
2. **Don't build agile systems, build agile platforms** - There is an analogy starting to be used in IT circles; “Why do cars have brakes? Answer: So they can go faster”. In the context of research this entails IT building platforms that are designed to allow individual research systems to be built and integrated fast. More importantly, the platform would enable the system to be easily recovered and any damage the system may cause to be contained (i.e. use the brakes). A stable platform to support this type of endeavor fits well within existing IT culture.
3. **One solution does not fit all. Sometimes it just needs to be custom** - (not that there's anything wrong with that) Adopting standards where possible and platforms with brakes all goes a long way to enabling central IT to deliver efficiently. Sometimes however there is no option. It just has to run that “left of field” version of Linux or the PC cannot be upgraded because they don't make the cards for that quarter of million dollar instrument anymore. Central IT needs to cater for this either by having a dedicated team within the IT department or extending the scope of the existing teams. Ideally it should be a combination of both.
4. **IT are not scientists** - When a University has a centralised IT Services division there is often a claim of shadow IT with “that” technical or science officer based in the Faculty. More often than not the technical officer may well be working with computers but they will also have a degree in the relevant discipline. Instead of trying to muscle them out, embrace them. These specialists are the missing link between the technology and the application of the science. IT should be helping to remove them from the mundane tasks of building computers for the Faculty office staff and working with them to improve research in their faculty with the take up of eResearch.

ABOUT THE AUTHOR

Ossie Richards' career in information technology has extending over the last 26 years. He has consulted to and worked for organisations from IT vendors to heavy industry, retailers and Universities. Through this time his focus has been on customer service and building IT delivery teams. In the last three years, as the eResearch Manager for the University of Newcastle, he has concentrated on delivering diverse and customized research computing support to academics across the University from a centralised IT team. He is in an ideal position to detail challenges and learnings in focusing centrally funded IT resources to assist research pursuits.