
Committee Charge
Executive Vice President (EVP) Diaz and Provost Woodson created a Management Operations Review Team (MORT) to seek and implement improvements to our operational services. The MORT team consists of Dean Akridge (Agriculture), Dean Jamieson (Engineering), Dean Weiser (Liberal Arts), Vice President Almond (Business Services), Vice President Buckius (Research), Vice President McMains (Physical Facilities), Vice President McCartney (Information Technology), and Managing Director Ken Sandel (Office of EVP and Treasurer).

The MORT group selected information technology (IT) on the West Lafayette campus as the first focus area to examine potential synergies and cost savings. Six committees, called Tiger Teams, were formed to examine the following areas: data centers, campus IT organizational structure, email services, OnePurdue, desktop computing services, and the computer labs. Each team was tasked to provide recommendations to improve the management, efficiency, and accountability of campus-wide information technology operations.

Executive Summary
The email Tiger Team (also referred to as the email committee in this document) was charged to provide recommendations on institutional communication strategy. Specifically, it has sought answers to the following questions:

- Should the University outsource institutional email services to outside providers?
- Should the dozens of existing email services on campus be consolidated?

The key constituents of the University are all represented on the team. (See Appendix A.)

General Process
The email Tiger Team has had three face-to-face meetings in addition to regular communications via email. The discussions are open, frank, and inclusive. Following each meeting, a draft of the minutes is distributed to the committee for comments via email. The minutes are then revised, if necessary, and finalized. For reference, the minutes of the meetings are appended. (See Appendices C, D, and E.) It should be stressed that this report is based not only on the minutes of the meetings but also on discussions through email communications within the committee (which often include more updated information previously not available to the committee).
Background

Financial savings of email outsourcing. The email Tiger Team is aware of the reality of email outsourcing by many colleges and universities around the country and has discussed the rationale for such a decision. Based on the information available, it is clear to the committee that the key motivation for outsourcing is financial: A typical institution would expect to save up to $1 million per year in operating costs. A natural question is how much Purdue would save if its institutional email services were outsourced to a commercial provider. The committee was told that Purdue runs an efficient and low-cost email service and thus differs from most colleges and universities that have decided to outsource. The initial estimate was that Purdue could expect to save only around $60,000 to $70,000 per year if it were to adopt a basic package currently available on the market. Questions were raised about the estimate, since it did not seem to have taken into account short-term expenses related to such a transition; administrative overhead associated with running the service through a third party; and any possible long-term expenses if the chosen provider were to charge a fee for the services after the initial (free) period ends. Following several discussions, the consensus is that substantial savings in operations cost are unlikely.

Pros and cons of email outsourcing. Without strong financial incentives, it is generally felt that there must be compelling reasons for a decision to outsource institutional email because it affects everyone on campus and may lead to undesirable consequences related to IT security and privacy. To this end, the team has compiled the following list of pros and cons and carefully examined each of them:

Pros:
• Portability.
• Enhanced social-networking capability.
• Sophisticated collaborative environment.
• More storage space.
• Improved spam filtering.
• Better interface and less down time?

Cons:
• Complication in Family Educational Rights and Privacy Act (FERPA) compliance.
• Loss of control on forensic data (e.g., subpoenaed emails).
• Protection of sensitive communication (e.g., intellectual properties).
• Loss of access to mail stream (for research purposes).
• Loss of in-house infrastructure and skill set.
• Uncertainty in the future of outside service providers.

The results of an informal survey of the team members indicated that although nearly everyone appreciates the convenience and benefits of cutting-edge technology, faculty and staff tend to weigh the “cons” much more than the “pros.” They believe that one can already take advantage of the convenience and benefits simply by signing up for a free account with an outside service provider and having Purdue emails automatically forwarded to that account. This would also avoid the controversy of forcing everyone to use the same service provider. Student perspectives have been heard and carefully discussed. In the end, it is generally felt that the arguments for email outsourcing, while valid, are not compelling.
**Student Email vs. Faculty/Staff Email.** The email Tiger Team has also discussed the possibility of outsourcing (undergraduate) student emails while keeping faculty/staff emails in-house. This would preserve basic infrastructures and expertise and would thus make it easier to take back the outsourced services if they were to become a financial burden on the University in the future. It is noted, however, that some disadvantages associated with email outsourcing would remain, including: the loss of a common environment for students and faculty/staff; a potentially high cost associated with the transition; and long-term costs for administering the services. Although no major downside of the student-only option could be identified, it is generally felt that the reasons for adopting the option are not compelling.

**Consolidation of On-Campus Email Services.** The email Tiger Team is made aware that there are more than 20 email service providers on the West Lafayette campus. It is noted that some of the existing email services are managed by small IT teams that may lack the expertise in dealing with security and legal issues and might thus pose a security threat to the entire Purdue IT system. On the other hand, a small number of academic departments or centers need to provide their own email services — e.g., to enable research — and have the resources and expertise to securely administer them. The team generally feels that it is highly desirable to limit on-campus providers to a small number. A consolidation of email services would also likely lead to substantial savings in operations cost.

**Recommendations**

Based on the information presently available, and on the discussions via face-to-face meetings and email communications, the email Tiger Team makes the following recommendations on institutional communication strategy:

- The University is not advised to outsource its email services to outside service providers.
- Existing on-campus email service providers are advised to re-evaluate the benefits, risks, and costs associated with independent services, and to consider moving to centralized services.

It should, however, be noted that the Purdue Student Government (PSG) representative is in disagreement with the recommendations.
Appendix A: Team Membership
The institutional communication strategy Tiger Team consisted of representatives from faculty, IT areas, the student community, and Student Services:

- Erica Carlson, Associate Professor of Physics
- Dave Carmichael, Director, Engineering Computing Network
- Brianna Castle, Purdue Student Government
- Wei Cui (Chair), Professor of Physics
- Martin Curd, Associate Professor of Philosophy
- Shawn Donkin, Professor of Animal Science
- Scott Ksander, Executive Director of IT Networks and Security, ITaP
- Sam Midkiff, Professor of Electrical and Computing Engineering
- Mike Rubesch, Executive Director of IT Systems and Operations, ITaP
- Gene Spafford, Professor of Computer Science and Executive Director of the Center for Education and Research in Information Assurance and Security (CERIAS)
- Dan Whiteley, Student Services
Appendix B: Reference Documents

The following is a list of the documents that were made available to the email Tiger Team over the course of the discussion:

- The Google Apps Education Edition Agreement between Indiana University and Google
- The University Communication Services Agreement between Indiana University and Microsoft
- Attorney’s comments on Indiana University’s decision to outsource its email services
- The latest version of the Google Apps Education Edition Agreement
- Attorney’s comments on the latest version of the Google Apps Education Edition Agreement
- “Despite Risks, IT Officials Outsource Campus Email,” an article published in the Chronicle of Higher Education that provides some data on email outsourcing.
- “Purdue Email versus Gmail,” a paper written by students in TECH 621E (Information Assurance Ethics) that discusses many of the topics covered by the email Tiger Team.

After the conclusion of the last face-to-face meeting, the email Tiger Team also received additional information from the PSG through the student representative on the team. It should, however, be stressed that the team is not charged to specifically examine the PSG’s proposal to outsource institutional emails to Google (or any other proposals). Nevertheless, the team has taken into account the PSG’s points of view on the subject before making the recommendations.
Appendix C: Meeting Minutes, 11/4/2009

Present: Carlson, Carmichael, Castle, Cui (Chair), Curd, Ksander, Midkiff, Whiteley
Absent: Donkin, Rubesch, Spafford

Many thanks to Erica Carlson for taking detailed notes.

The meeting was focused on the pros and cons of outsourcing institutional emails. Following lively discussions, it was generally felt that it would be difficult to come up with clear-cut pros and cons. Nevertheless, the following list was compiled:

Pros:
• Mobile communication.
• Enhanced networking capability.
• Integrated tools.
• Environment for collaboration.
• Less down time.
• More storage space.
• Better interface.
• Potential financial saving (to Purdue), about $65,000/year.

Cons:
• Privacy issues related to FERPA.
• Protection of sensitive communication (e.g., intellectual properties).
• Loss of control on institutional emails.
• Legal issues (e.g., subpoenaed emails, varying legal standards at data storage locations).

It was suggested that each committee member should attach a numerical significance to the items in the list (on a scale of 1-10, with 10 being most significant). Please send me your input at your earliest convenience.

Notes:
1) The cons appear to affect student emails to a lesser extent than staff emails. The two could be treated differently.

2) Purdue professors are already not allowed to send sensitive student information via email. Why would FERPA still be an issue here?

3) Everyone is already free to forward his/her Purdue emails to his/her outside email accounts if he/she wishes to take advantage of many of the pros listed. The question is what additional benefits that can be gained by having Purdue formally outsource its email service. One benefit might be that having a Purdue address can keep emails from being caught in spam filters.

4) It seems that Purdue would save a lot more than about $265,000 over four years by outsourcing emails.

5) The loss of control on emails would lead to the loss of capabilities to deal with missing emails. How do we ensure the fidelity of critical communications, e.g., between a professor and her students?
6) If Purdue emails are subpoenaed as part of a lawsuit, outside emails service providers would unlikely be as eager to protect Purdue interests.

7) Questions can be raised regarding outsourcing institutional emails to providers who store data in places with vastly different legal standards.

8) Outsourcing emails may compromise the protection of emails that contain sensitive information.

9) Outside email providers may go belly-up in the future.
Appendix D: Meeting Minutes, 11/11/2009
Present: Carlson, Carmichael, Castle, Cui (Chair), Curd, Donkin, Rubesch, Spafford, Whiteley
Absent: Ksander, Midkiff

After a lengthy discussion, it was generally agreed that financial savings from email outsourcing would likely be quite minimal, if any at all. The current Purdue system is very lean compared to many other universities. The projected savings (about $65,000 / year) would be reduced if the chosen outside provider decided to charge for the service later on or if significant manpower is required to interface with the provider. Without financial incentives, what would then be the main motives to outsource email services?

The answer appears to lie in a strong student interest in the enhanced features that are not available with the in-house system, such as a collaborative environment, social networking, and integrated tools. It was, however, pointed out again that the students could already take advantage of the features by signing up for accounts with outside providers, without having Purdue formally outsource its email services. While this is certainly true, the students may still prefer services that carry the Purdue brand name.

In contrast, faculty and staff generally felt less compelled to switch services just for the enhanced features, even though most already have personal accounts with outside providers. They tended to focus on possible risks of email outsourcing, such as loss of forensic data, loss of in-house skill sets, loss of essential access to mail streams for research purposes, and so on. The chosen provider might also change terms later on, which would put the University in an awkward position with no viable alternative options.

A possible solution is perhaps to outsource student emails but keep faculty/staff emails in-house. This would preserve essential capabilities and thus make it easier to take back the outsourced services if necessary. Several drawbacks related to the separation of student and faculty/staff services were discussed. For instance, the student and faculty/staff calendars would not be in sync, so some of the perceived benefits may not materialize, but this would be no worse than the current situation. Other than possible risks related to the change of terms, no major downside of outsourcing student emails could be identified.

It was, however, pointed out that the separation of student and faculty/staff environments might not be good for the University in the long run. Specifically, the following issues were brought up for further discussion:

1) Would it be more desirable to have students and faculty/staff share the same environment? In principle, the University could devote resources to the development of an environment with features that the students are now craving.

2) Is it worrisome that it might take much, much longer for faculty/staff to adopt current and newer tools and environments? Some thought this could happen without pushes from students for cutting-edge technologies.
Appendix E: Meeting Minutes, 12/09/2009
Present: Carlson, Carmichael, Castle, Cui (Chair), Curd, Ksander, Midkiff, Rubesch, Whiteley
Absent: Castle, Donkin, Spafford

Mike Rubesch briefed the committee on potential issues with outsourcing University email services to Google (as noted by the attorneys involved), many of which have been discussed by the committee in previous meetings. The attorneys also commented that “there appears to be considerably less risk associated with a ‘student-only’ approach to outsourcing,” in terms of FERPA compliance.

A lengthy discussion ensued regarding the pros and cons of outsourcing only undergraduate student emails. The main advantage of this approach is that it would satisfy the majority of students, according to PSG, while retaining infrastructures and expertise and addressing faculty and staff’s concerns. The disadvantages noted include the loss of a common environment for students and faculty/staff, potentially high costs associated with the transition, and long-term costs for administering the services.

The discussion returned to the same key question asked previously several times: Why cannot students simply sign up for Google accounts to enjoy all the benefits that they feel are important to them? The committee generally felt that the argument for needing a Purdue logo was not compelling. It was also felt that the transition would more likely lead to a financial burden on the University than savings because the current Purdue system is very lean (compared to other universities). Therefore, the consensus appears to be that the committee cannot endorse email outsourcing at present.

The discussion subsequently turned to the question of consolidation of email services on campus. The consensus is quite clear on this issue: It is highly desirable to limit on-campus email service providers to a small number of departments or centers that require such services (e.g., for research purposes). It was pointed out that most of the existing email services are administered by small IT teams that often lack the expertise in dealing with security and legal issues and might thus pose a security threat to the entire Purdue IT system. The committee recommend that the users of those services be advised to make a transition to the University’s central email service and that the services be phased out once the transition is complete.