TUFS
Teaching Note

Synopsis

This case describes how the development and implementation of a major IT project went horribly "off the rails". Despite uncertainties regarding scope, deliverables, and strategic alignment, the project launches but soon deteriorates as the partnership between IT and the business falters. Now, well over budget and still without any sign of benefits (imminent or otherwise), the CFO is faced with a decision – to continue with the project or abandon it.

Key Issues

1. In this case, there are clear differences of how IT value is perceived. IT thought it was bringing the project in on time and on budget; the underwriters wanted an improved system but no process changes; the CFO wanted cost savings; and other executives wanted improved business capabilities.
2. The entire organization expected that technology could simply be plugged in to deliver value, without any recognition of the work the business would have to do. The business completely abdicated its role in this project, both at a senior level and at a practitioner level. Therefore, it is not surprising that it got an "IT view of the world".
3. There is no clear link to business strategy; this project was very unclear about its value and its objectives. There doesn't appear to have been a priorization process or any oversight (governance) over the project's general development.
4. There were no apparent stage gates where the benefits and the costs could be reassessed.
5. No success metrics were established up front and business executives and functional managers had no "skin in the game"; their success metrics were not linked in any way to the success or effectiveness of this project.
6. All parts of the business, the CFO and the underwriters, have a negative perception of IT -- that the project is costing too much, didn't deliver the right things; didn't do things right and hasn't added value.

Teaching Strategy

This case takes a "horizontal" slice through a number of coexistent issues (see Appendix A for a more detailed discussion of these). As a result, the challenge is "knowing where to start" – just as it is in real organizations – and this requires detective work.

Setting the Context
The IT function cannot deliver benefits by themselves. What is required is a successful partnership between IT and the business. Typically, IT takes ownership of the technology and the business takes ownership of the transformation (e.g., required process changes). To highlight the critical need for this partnership, it is fun to play a "finger pointing" game. To do this, divide the class in two and make one half assume the role of IT and the other half assume the role of the business. Now ask them to take turns "blaming" the other side of the class for the dilemma that IT finds itself in at Northern. When blaming the other side, make them cite specific evidence from the case to support their accusation. That is, don't let

them simply say that the other side "screwed up". You can record these accusations on the front board. Students tend to really engage in this activity. You will be surprised by how many items you can get down. Don't spend more than 5-10 minutes on this as this creates a lot of energy and involvement and you want to contain it. What has just become obvious to the class through this exercise is the fact that BOTH sides are to blame. This exercise tackles the first discussion question (i.e., what went wrong with TUFS investment?) but it accomplishes it in a much more engaging manner than simply asking the students to tell you what went wrong.

Outlining Responsibilities within the Partnership

With the blame equally distributed (as evidenced by having two long lists of blame on the front board), you can ask the class to suggest what "should have been done" by IT and the business at Northern. In addition to identifying the necessary tasks, ask the class to assign responsibility for each task. The list of accusations, if done well, typically contains most of these tasks. For instance, if the underwriters are blamed for not taking the time to bring the IT developers up to speed on system requirements, then this activity would be identified and responsibility can be assigned. This typically leads into some good discussion around who owns which task and often leads to a sharing of responsibility – again leading to the conclusion that an effective partnership is required to produce realizable benefits. This exercise also addresses the second part of the first discussion question (i.e., what can be done to prevent these problems in the future?).

At this point, I would ask the class if they found the "celebratory picture" on Drysdale's desk odd. What does the picture suggest about the "partnership" at Northern? Why did IT celebrate the delivery of a system with reduced functionality? Why were the underwriters not included in the celebration? Is this not a "win-lose" situation (i.e., IT wins and the business loses). Given that both members of the partnership work for the same company, would you not want the possible outcomes for the partnership to be limited to a "win-win" or a "lose-lose"? How would you do this? While exploring this issue, why is Drysdale the one that the CFO hauls into her office to explain the status of TUFS? What does this suggest?

Looking Back

At this point in the class, it is appropriate to ask the class to "look back". The question is "in hindsight, should Northern have invested in TUFS"? The responses may surprise you. Typically, the class breaks into equal parts – one half suggesting that Northern was right to invest and the other saying that the decision to invest was ill-advised. Whichever side they take is immaterial but be sure to push the class to defend their answer. Typically they make statements like:

- Northern was correct to invest in TUFS because it promised to bring efficiency to the underwriting process and new opportunities for top line growth.
- Northern was mistaken to invest in TUFS because senior underwriting managers didn't really appear to want to change what they were currently doing.

What is interesting is that, even with hindsight, it is difficult to argue that Northern should have (or not have) invested in TUFS. It is important to impress upon the class that simply installing a new system does not produce benefits. Benefits are produced by making appropriate changes to the work processes to capitalize on the capabilities of the technology; that is, "engineering the benefits" from an IT project. Other common frameworks can be appropriately introduced here; for example, the "people, process, technology" framework.

Discussion Questions

What went wrong with the TUFS investment and what can be done to prevent these problems in the future? While TUFS was supposed to streamline the underwriting process and deliver new online capabilities, it was developed by IT with little or no input from the business. As a result, the system reflects only IT's vision of this functionality. The business therefore must bear responsibility for not participating in the development of this project, which would have given them input into what was being done, insight into the assumptions that were being made and the opportunity to change what was being done if it didn't fit the business' needs. Furthermore, there appears to have been no formal project governance process managed by the business. Therefore, when IT needed to cut functionality in order to meet its time and cost objectives, it merely informed the business of what it was doing. There was no assessment as to what impact this would have on what was delivered in the end. IT and the business also had different measures of success. For IT, it was to deliver the project on time and on budget, even if this meant cutting functionality. For the CFO, it meant delivering cost savings. For the underwriters it meant having a system that was accurate and capable of delivering at least as much functionality as the old one. For other executives, it meant delivering new online capabilities. There was clearly a misalignment of value goals and business objectives in this project. Furthermore, no one in the business was held accountable for the results of this project. Therefore, they were unwilling to commit the resources and make the effort to ensure it delivered on its objectives. IT is responsible for not including training and help in its project plans.

In the future, all IT projects should have a business sponsor and a business steering committee, which would establish and monitor the benefits of the project as well as IT's deliverables. Major changes in functionality should lead to a reassessment of the benefits to be delivered. All participants – both business and IT – should be measured on these benefits. As well, no IT project should be undertaken without expert business resources participating, ideally fulltime. Finally, no IT initiative should be implemented without a value realization phase, where efforts are made to train staff in new procedures, fix problems and re-design business processes to complement the new system. Major errors need to be addressed as part of this phase through root cause analysis to prevent negative perceptions developing.

What does Northern need to do to realize the benefits that were projected for TUFS? It needs to do a thorough assessment of the problems being experienced with TUFS. This should be done by a joint IT-business team and should address the root causes of the problems being experienced. The joint team should then determine what business process changes and what system changes will be needed in order to achieve the project's functional objectives. This team will also determine what benefits should be achieved with the revised project, including cost savings and new capabilities on which further functionality could be built. The completed costs and benefits should be presented to a TUFS steering committee, consisting of the CFO, the CIO, and the relevant business executives. *Together*, they need to agree on what needs to be done. The entire business-IT team should then be held accountable for delivering on this plan – both costs and benefits.

How can they measure these benefits? All of the benefits of the new system should be identified, not simply cost savings. These could include: new growth possibilities for the organization and new foundational capabilities on which future development will be possible. Improved information, and other business benefits, should be articulated and then quantified

as much as possible. Ideally, a scorecard should be developed and delivery of these benefits should be monitored. Where the benefits change significantly, they must be presented to the TUFS steering committee.

Appendix A
Issues Discussion

Chapter 1: Developing and Delivering on the IT Value Proposition. In this case, there are clear differences of how IT value is perceived:

- IT thought the value was bringing the project in on time and on budget, even if some of the functionality had to be deferred.
- The underwriters wanted an accurate system and improved functionality. They did not expect processes to have to change.
- The CFO expects cost savings in the underwriting department, i.e., reduced headcount
- Some executives (it's not clear who) wanted e-business opportunities to attract more business. These are taking time to deliver. Executives feel that they've been lured into spending money on this when it clearly wasn't essential to their business strategy. Even though the value of this component declined over time, no one took another look at this part of the project.
- The entire organization expected that technology could be plugged in and deliver value, without any recognition of the work the business would have to do. Here IT and the business didn't work together to deliver value.
- Even though this project was delivered on time and on budget, TUFs lacked a number of components that would ensure its success: business resources to participate in its development and implementation; no training or help desk support for the new functionality; no recognition of the need for change management or changed business processes.
- While efforts were made to correct problems, there was no value realization phase. Users experience significant frustration and resistance has developed as a result. Root cause analysis of the source of these problems appears to be missing.

Chapter 2: Developing IT Strategy for Business Value

- There is no clear link to business strategy; this project was very unclear about its value and its objectives. There doesn't appear to have been a priorization process or any oversight (governance) over the project's general development.
- Business strategy changed over the life of the project but the project was not reassessed
- The benefits were not reassessed when the functionality was cut
- The project was extremely large, would have benefited by being "chunked"; this would have made it easier to better manage what was being done and some of the problems that arose.
- There were no apparent stage gates where the benefits and the costs could be reassessed.
- Although the project contained both revenue-generating and cost savings opportunities, only the cost savings appear to be important now. When and how did the business strategy change and why was it not reflected earlier in the project's requirements and plan?
- The business completely abdicated its role in this project, both at a senior level and at a practitioner level. Therefore, it is not surprising that it got an "IT view of the world".

Chapter 3: Linking IT to Business Metrics

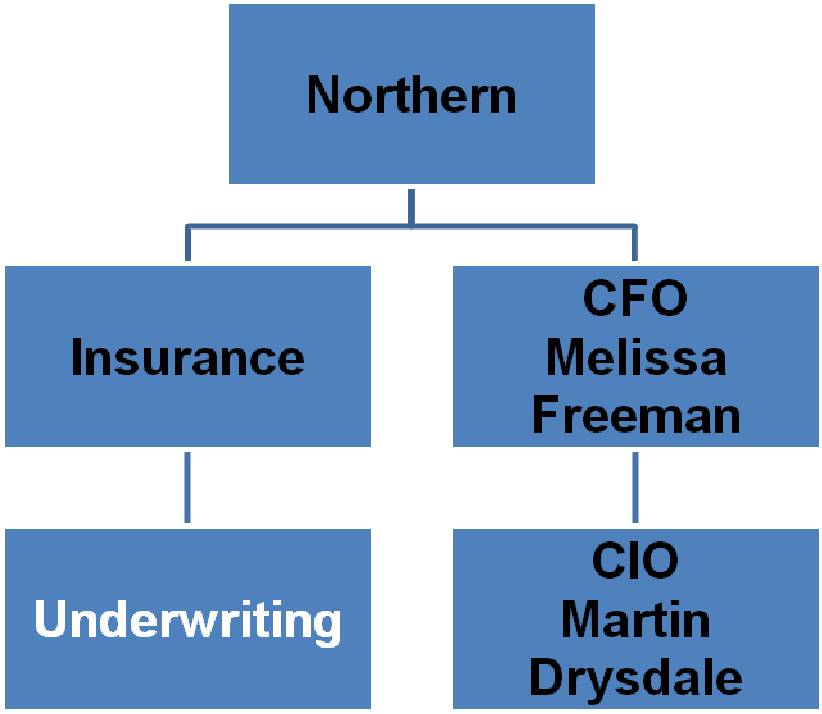
- No success metrics were established up front.
- Business executives and functional managers had no "skin in the game"; their success metrics were not link in any way to the success or effectiveness of this project.

- The only metrics that management is looking at is cost savings and increasing investment.
- The primary IT metric was delivery on time and on budget. This led it to overlook aspects of this project that would make it more effective for the business. Thus, it cut functionality in order to meet these project goals.
- IT appears to have no clear understanding about how the gaps in functionality and the errors are affecting the business.

Chapter 4: Managing Perceptions of IT

- All parts of the business, the CFO and the underwriters, have a negative perception of IT. This is largely driven by the errors in the TUFS project and the lack of training and help provided.
- Drysdale is frustrated that neither group sees the good things about the system and are resisting using it.
- Nothing is mentioned about the e-business component of this project. It may be meeting the enterprise's needs for top-line growth but all the focus is on the problems of the system.
- There is a perception that the project is costing too much, didn't deliver the right things; didn't do things right and hasn't added value.
- In this case IT is failing at a competency level because TUFS is not meeting basic underwriting needs.
- While the project also implemented a strategic goal and was able to manage the project on time and on budget, these mean nothing because of the challenges meeting these level 1 needs.

Appendix B
Organization Chart



IT Leadership at MaxTrade
Teaching Note

Synopsis

MaxTrade is typical of many smaller, fast growth organizations with dynamic environments whose rates of growth outstrip their ability to manage and govern IT. As a result, the need for well-established IT practices is not recognized as early as it should and the company often reaches a crisis point before there is a call for action. At this point, there is not just one problem to solve but many. As the CEO at MaxTrade declares "we're in such a mess". Now something must be done in order to regain control over IT so that it truly supports the business.

Key Issues

1. There is no IT plan and short term thinking is the order of the day. As a result, 932 projects are being "worked on" by 152 staff. The environment is highly political and IT staff can't say no to any project. There is no mechanism for prioritizing projects, or ensuring that the right projects get worked on. Since the business unit heads have a lot of independence. Fanning has to convince them they can make more money with an IT strategy than without.
2. Because of the constantly changing priorities, and poor operational controls, IT has no operational of project development credibility. IT staff are seen as order takers. Furthermore, senior business leaders have no confidence that IT staff can work in partnership with them.
3. IT lacks suitable operational and organizational controls. The auditors' reports are critical of rapidly escalating operational risks – unacceptable in today's business environment. These must be a priority for Fanning and for the organization. There are also missing development controls. Better control and monitoring of projects is clearly needed to ensure they are delivered on time and on budget.
4. IT staff morale is extremely low. There is no strategy for developing or retaining people and MaxTrade is a very difficult work environment. There is no ability to match resources with projects and no formal skills assessment. In addition, there are no development programs for current people.

Teaching Approach

This case takes a "horizontal" slice through a number of coexistent issues (see Appendix A for a more detailed discussion of these). As a result, the challenge is "knowing where to start" – just as it is in real organizations – and this requires detective work.

Setting the Focus
Richard Fanning's challenge should be identified at the very beginning of class so that everyone understands the goal of the class discussion – *to produce an action plan that will get MaxTrade on track within 12 months*.

Issues Analysis

The challenge for students is not in identifying issues (as they are made abundantly clear within the case) but to organize them in order to assess priorities. As a result, the first step is to get the students to identify the existing issues at MaxTrade. While they are doing this, it is important to capture these issues on a flip chart or white/black board at the front so the class can return to them and categorize them (more on this latter) in order to attach priorities. Getting the issues on the board can be a rapid-fire process taking only minutes. As soon as the frequency of issues identified starts to lessen, you can move on to the next step.

Once issues are in front of the class, organize them into categories to provide a structure for the subsequent analysis. You can simply ask the students to suggest logical groupings. They may think of the following: acute versus chronic issues, short-term versus long-term, operational versus developmental issues, or people versus process versus technology. There are merits in just about any framework so I would go with the one that the students prefer or the one that you have already presented to the class. This case has sufficient issues that it is likely to be successful in populating just about any framework.

A key issue to ensure that students note is that IT staff morale is at "rock bottom" and that IT is hemorrhaging people with its current turnover rate "approaching 50% annually". IT people are hard to retain in this politically-charged, pressurized environment and the staff of 152 is overburdened. Without immediate action to stem the morale problem and motivate productivity there soon will be no staff left! This is a point worth discussing so ask the class if anyone has experienced a 50 percent turnover rate. Get them to describe the effects of this.

Be sure to ask the class what they think IT being "on track" actually means? Here, typically students may take the discussion in many different directions. Some focus on the *operational* side of IT interpreting "on track" as having a "solid IT infrastructure, available 100% of the time". Others focus on the *development* side of IT pointing to the fact that there are 932 projects *supposedly* under development by 152 development staff (see box). To these students, being "on track" means having a well-defined process for assigning priorities as well as a process for allocating resources among projects so that project delivery occurs on time and within budget. Still others identify specific problems cited within the case of which there are many (e.g., low staff morale, escalating operational risks, critical auditors' reports, and sour relationships with vendors). To these students, being "on track" means solving the existing problems at MaxTrade.

> The case says "supposedly" under development because a development staff of 152 is not capable of delivering 932 projects (i.e., approximately 6 projects per staff member). Since undergraduate students are not apt to know this, simply tell them that development projects are measured in person-months and require multi-person development teams.

At this point, you should refocus the discussion by asking the students if they think it is reasonable to expect that "all the problems" can be solved within a 12 month period at MaxTrade. Chances are that they will conclude that this is an unrealistic expectation. Therefore, someone at MaxTrade needs to define "on track" and get agreement from the CEO as well as the business unit heads on this definition. This step is necessary because, without articulating the expectations of the senior management team about what value he is to deliver first, Fanning is setting himself up for failure.

To bring this part of the discussion to closure, you need to make it clear that, while there is no single best definition of being "on track", there needs to be a process put in place at MaxTrade to get agreement from the senior management team about what this means. Ideally, Fanning should take the lead on this by proposing what he thinks can be accomplished in the next 12 months, presenting this plan to the CEO and business unit heads, and seeking their agreement and ratification.

Rather than establish a single milestone event, it is preferable to identify a number of smaller deliverables. It is interesting/fun to ask the class to suggest outcomes/evidence that senior management might consider as indicative of success. This might include things like: percentage of projects delivered on time and within budget, statistics concerning availability of key systems, evidence of an effective business continuity plan, decreasing frequency of system outages, positive auditors' report, and healthy vendor relationships … plus many more.

Developing an IT Action Plan

Now you can focus the discussion on developing an IT action plan for MaxTrade. It is recommended that you follow whatever organizing framework you developed in the previous step. The task is to start fleshing out elements of the plan to address the specific issues you have identified. Using one framework, for example, it is possible to reduce the IT plan to the following categories: governance, people, development and operations. Environmental issues should also be kept in mind when suggesting strategies for the other categories. For example, given the need for the business to "turn on a dime", it is critical that strategies allow maximal flexibility in supporting the business.

At this point, the discussion can be opened up inviting ideas for how to address the major categories of issues that must be addressed within the IT plan, which Fanning will present to the senior team at MaxTrade. As students offer ideas, it is important for them to explain exactly how their strategy addresses the specific issues that were identified earlier. For this reason, I would keep these issues visible at the front of the class. This process ensures that the IT plan will be effectively tailored to address MaxTrade's situation.

Implementing the IT Action Plan

At this point, ask the class what they think Fanning might do to introduce the internal IT changes that are part of the plan. How can Fanning create some excitement around the execution of his plan? How does he get staff members to take ownership of the plan? Should he invite his entire staff to a "town-hall" meeting? Should he work one-on-one with key staff members first? What can be done to ensure that the plan will be embraced by the IT staff?

So, with this in mind, challenge the class to suggest things that Fanning could/should do to also get the business unit heads to embrace his IT plan? How can he establish the personal credibility and trust that he realizes must exist for him to be able to function effectively at MaxTrade? In addition, how can he establish the credibility of the whole IT department?

The last question for the class is "if you were Fanning, would you take on this job"? Why or why not? Experience suggests that responses fall into the following two categories:

- Things are so bad at MaxTrade that anything Fanning could do would be an improvement so therefore Fanning can't lose; and

- Things are so bad at MaxTrade that Fanning, despite his "turnaround talents", will not be able to rescue IT at MaxTrade within a 12 month timeframe. So, basically, Fanning can't win!

Discussion Questions

The CEO Robinson tells Fanning "what I need is to have you get us on track again within the next twelve months.

What does it mean to be "on track"? As noted above, "on track" means different things to different people. Fanning must work with Robinson to identify the top issues he must address in the next year, their priorities and what measures of success he should use. Certainly, key personnel, operational and risk factors must be addressed. Less clear is how far he can go with IT strategy, applications development issues, and capabilities development. Ideally, a balanced scorecard approach should be used to clarify Fanning's goals and to quantify them in a number of critical areas.

What are the next steps?

1. **Project Governance (i.e., a leadership role for Fanning, putting processes in place to identify potential IT projects, establishing methods for prioritizing these IT projects, deciding how much to spend on IT, and a means for allocating these resources)**
   - There must be a process to ensure that the "right" things are done with respect to IT.
   - Fanning must help the organization change its practices for dealing with IT – both formally and informally.
   - A steering committee should be established to prioritize IT projects. Students should decide who should sit on this committee and how often it should meet.
   - Fanning must establish IT as a credible business partner with both executives and vendors.
   - Fanning needs a means to better align IT-business strategies.

2. **Project Management Skills and Controls (i.e., identifying key IT skills, training development programs, hiring/retention for key IT positions, focusing on project management)**
   - Good project managers need to be identified and nurtured.
   - Some excellent project managers should be hired to kick start project manager development and to staff a PMO (project management office).
   - Better internal control and monitoring of projects is clearly needed to ensure they are delivered on time and on budget.
   - Projects can't be done where priorities are always changing and IT people can't say no. The macro-environment must change. (See governance above.)
   - Need to develop credibility with business by demonstrating that projects can be delivered.
   - Because of a rapidly changing environment, projects should be limited in size and delivered quickly perhaps limited to a six-month maximum delivery.

3. **Operations Reliability and Controls (i.e., repairing relationships with the vendor community, stabilizing the operational systems)**

- Fanning has already done a "thorough assessment of the current technology situation at the company" so we can assume he has an inventory of major applications, operating systems, networks, hardware as well as vendor contracts. Now he needs to address the situation directly.
- Appoint a "swat" team to troubleshoot the system outages so that they can be dramatically reduced. Given that the existing systems handle trades generated by customers as well as employees, having a "rock solid" infrastructure is essential.
- Preparation of a business continuity plan in the eventuality of a disaster.
- Fanning will have to create an IT technology roadmap to outline the architectural plan to be followed.
- Many currently non-existent control processes will have to be introduced including processes for testing new systems, installing new software releases, change control mechanisms, desktop platform guidelines, etc.
- Meet with the vendor community to explain the "go forward" IT plan so that they can assess their potential to bid on future work. At the same time, Fanning can negotiate his way out of existing problems with current contracts. By focusing on future work under a new CIO regime at MaxTrade, it is likely that the vendor community will work collaboratively with Fanning.

4. **Staff and Capabilities Development (i.e., retaining existing staff, attracting new hires, creating an exciting workplace)**
   - According to Fanning, "the immediate challenge here is to build a team capable of providing innovative solutions on a timely basis and to start treating the business units as customers. We have to convince everyone that we all work together and IT is committed to building a partnership with them." So, the question is, how do you build a culture of customer service?
   - A skills assessment needs to be done to identify what types of new hires are needed.
   - Development and training programs are needed for current people.
   - Programs are needed to fast track people into: project management; into the company after they join; and to develop a greater knowledge of the business.
   - Fanning needs to take immediate action to stem the morale problem, limit the exodus from the firm, and motivate productivity.
   - Something needs to be done to get the work under control, to identify top performers and to reward and keep them.
   - "Bad apples" (i.e., those already disenchanted with MaxTrade) need to be weeded out as they can poison the atmosphere.
   - New people need to be attracted to work in a difficult environment. What can this company offer them?
   - A staffing strategy needs to be developed to match resources with projects.

Is one year achievable, why or why not?

Not only does Fanning need an IT plan but he also needs a "plan for implementing his IT plan". In order to establish a better and more controlled IT environment – particularly regarding strategic changes within the business that affects IT – Fanning must work *internally* (to put in place various strategies as suggested above to better manage the IT department) and *externally* (to forge an effective relationship between IT and the business).

On the internal side of things, the first element of the IT plan implementation involves staging. Given that IT staff are walking out the door at the rate of 6 per month and that system outages are increasing, there is immediate need for short-term action. Without

adequate short-term action, the long-term action is fruitless as MaxTrade will be in an extremely dire predicament. Therefore, it is important to ask the students to reclassify the elements of their proposed IT plan into two categories – short-term (within 3 months) and long-term (3-12 months) – since the IT plan is really a 12-month plan.

The IT plan might follow the following sequencing of activities. The **first job** at MaxTrade is to establish a stable operational environment; that is, reduce the system outages and stop the outflow of IT staff. The **second job** is to prioritize the project portfolio; that is, determine which of the 932 projects will actually be implemented, in what order, and what other potential projects should be considered. The **third job** is to establish an architectural roadmap outlining the technology platforms for MaxTrade which will in part dictate the choice of vendor. Members of these vendor communities can then be invited to bid to support elements of the new architectural roadmap. The **fourth job** is to establish a change management procedure and a mechanism for making enterprise decisions and the **fifth job** is to restructure and rebuild IT.

On the external side of things, it's not going to be easy. Realizing this, Fanning has already started building relationships with the business by spending considerable time with the business unit heads individually as well as with the "users" (i.e., the people actually using the IT systems in performing their day-to-day functions). He has gone on sales calls, and spent time with the business users discovering exactly what they do as well as learning the business. These are effective actions by Fanning but Fanning is just in the "honeymoon" phase of his appointment at MaxTrade. This phase will not last long. Soon the business unit heads will start demanding results.

CEO Robinson warns Fanning that the "business unit heads have a lot of independence here at MaxTrade because of the money they make for us". At this point, bring the students' attention to the MaxTrade organization chart (see Appendix B). This should probably be pre-boarded and left displayed throughout the class as it is an effective way to underline the fact that Fanning is "facing" some powerful independent individuals at MaxTrade. Furthermore, while the CEO is supportive, he too lays out Fanning's challenge as "getting the business unit heads onboard". Fanning realizes that he has to deliver some "tough messages to senior management" (e.g., some/many of the 932 projects will not be developed) and he anticipates that "not all of them are going to be receptive to my ideas" (e.g., everyone will demand that their projects are the most important ones to be developed … furthermore, they have the money to pay for their development)!

Appendix A
Issues Discussion

Chapter 2: Developing IT Strategy for Business Value

- There is no IT plan. Short-term thinking is the order of the day.
- Priorities are constantly changing because business units need to be able to turn on a dime to take advantage of new opportunities.
- Business unit heads have a lot of independence. Fanning has to to convince them they can make more money with an IT strategy than without one.
- The politics involved in determining what IT works on are so sensitive that no one in IT dares to say no to any new project.
- Projects can't be completed when priorities are always changing and IT people can't say no. The macro-environment must change.
- There is no process to ensure that the right things are done.
- Because of a rapidly changing environment, projects should be limited in size.
- Some IT money must be spent on stabilizing the existing IT infrastructure, introducing processes and controls and addressing immediate operational challenges.

Chapter 4: Managing Perceptions of IT

- Backup and recovery planning is minimal.
- Sour relationships with vendors are resulting in frequent switching and an integration nightmare.
- IT has 932 projects on the books that the users *think* are being worked on. IT needs to develop credibility with business by demonstrating that projects can be delivered.
- Fanning must help the organization change its practices for dealing with IT – both formally and informally.
- He must establish IT as a credible business partner with both executives and vendors. To do this, he must: create a stable operational environment; prioritize what needs to be done; and establish a mechanism for making enterprise decisions.
- Richard is a transformational leader. He needs strategies for dealing with senior management and establishing a better and more controlled IT environment – particularly regarding strategic changes that affect IT.

Chapter 5: IT in the New World of Corporate Governance Reforms

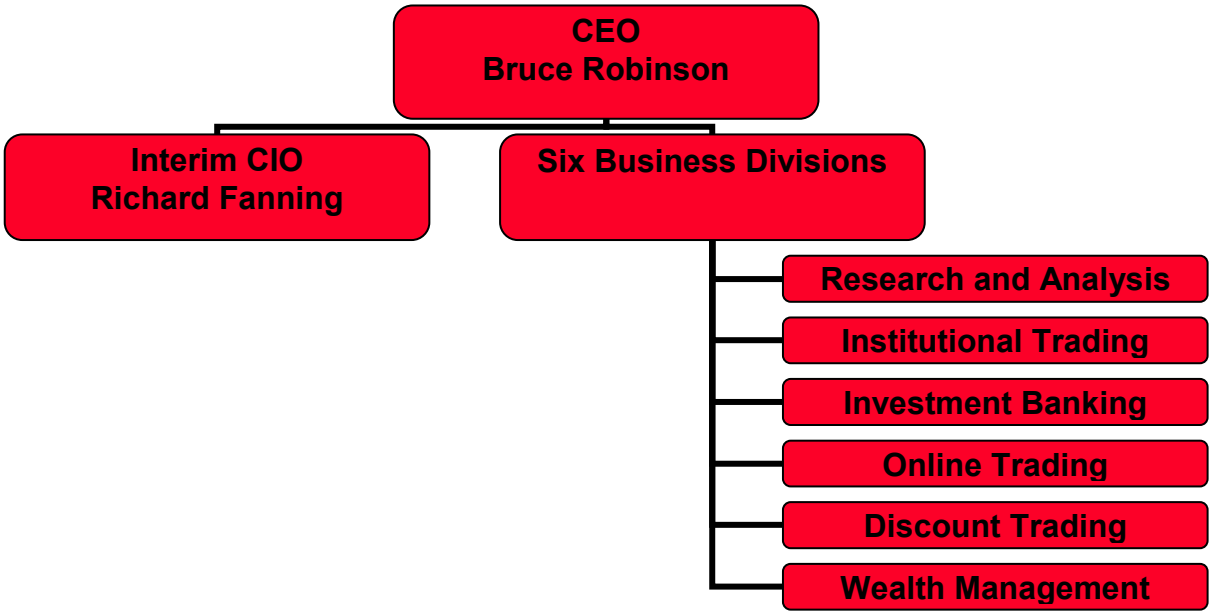
- The auditors' reports are critical of rapidly escalating operational risks. These must be a priority for Fanning and for the organization.
- Staff are making real-time decisions that could make or cost the firm millions of dollars. More controls need to be put in place.
- Better control and monitoring of projects is clearly needed to ensure they are delivered on time and on budget.
- Fanning must help the organization change its practices for dealing with IT – especially formal strategic governance.

Chapter 15: Developing IT Capabilities

- The company has a low morale problem with its IT staff and is haemorrhaging people
- IT people are hard to retain in this politically-charged, pressurized environment.
- Something needs to be done to get their work under control, to identify top performers and to reward and keep them.
- Bad apples need to be weeded out.

- New people need to be attracted to work in a difficult environment. What can this company offer them?
- A strategy needs to be developed to match resources with projects.
- A skills assessment needs to be done to identify what types of new hires are needed.
- Development programs are needed for current people to fast track them into: project management; into the company after they join; and to develop a greater knowledge of the business.
- Can't treat IT people like slaves, but need to find ways to make them more productive.
- Good project managers need to be identified and nurtured.
- Some excellent project managers should be hired to kick start project manager development and staff a PMO (project management office).

Appendix B
Organizational Chart



ModMeters
Teaching Note

Synopsis

When the CEO launches two new strategic initiatives requiring integration across all business units, the organization – whose IT decisions have been largely delegated to its business units in proportion to their revenue generating capacity – now faces the dilemma of how to prioritize its IT projects in order to support the new strategic "enterprise" vision.

Key Issues

1. IT is integral to implementing two new business strategies but there is little recognition by the executive team of its value. Each executive appears to have a different concept of IT value.

2. The lack of attention to refurbishing the infrastructure means that the bulk of IT spending is now focused "keeping the lights on". There is little foundation for building up new ventures and everything that is added increases the operational risk of failure – at major cost to the company.

3. The business strategy was developed without really involving IT in an effective strategy development process. As a result, IT strategy is clearly "mis-aligned" with what the CEO now wants to do for the enterprise.

4. While the CIO recognizes that investment in infrastructure and architecture will create a *capability* that will enable IT to be more responsive to the organization's changing business strategy, this is not recognized by the CFO or the business unit executives.

5. There appears to be no enterprise level prioritization process.

6. IT is seen primarily as a cost center. There is no recognition of non-financial measures – such as improved business capabilities, reaching new markets, or flexibility – might be important for the longer-term success of the enterprise.

7. The IT budget process is undermining the effective implementation of business and IT strategy.

Teaching Strategy

This case takes a "horizontal" slice through a number of coexistent issues (see Appendix A for a more detailed discussion of these). As a result, the challenge is "knowing where to start" – just as it is in real organizations – and this requires detective work.

The challenge facing ModMeters is made clear at the end of the case by Smith – "what we need is a *process* for IT planning and budgeting that will serve us well over the next few years. This process will need to accomplish a number of things:

- It will need to take an *enterprise* perspective on IT. We're all in these new strategies together.
- It will have to incorporate all types of IT initiatives – our new strategies, the needs of Fred and others for new IT to operate and improve our existing business, Stan's new auditing needs, and our operations and maintenance needs.
- In addition, we *must* find some way of allocating some of the budget to fixing the mess we have in IT right now.
- It must provide a better way to connect new IT work with our corporate objectives.
- It must help us prioritize projects with different types of value.
- Finally, it must ensure we have the business *and* IT resources in place to deliver that value."

But, before launching into developing such a planning process, it is useful for the class to clearly articulate *why* the current IT planning strategy is inadequate (as alluded to by Smith). A good strategy for opening up this discussion is to "play the Devil's advocate" and challenge Smith's assumption that the current process is not working by:

- Point out that Smith to be attributing a lot of ModMeter's IT woes (e.g., "spaghetti) to the lack of effective IT planning.
- Point out the fact that ModMeters is "the largest producer of metering components in the world" and "is making a reasonable profit" so things can't be "all bad".

Ask the class to first, describe the current planning process and second, outline the limitations of such a planning process. Clarifying the inadequacies of the existing planning process provides the focus for creating an improved process for ModMeters. Be sure to keep the organization chart (Appendix B) in view during this discussion. This will remind the class how R&D and marketing must be closely integrated with manufacturing in order to accomplish the two new strategic initiatives. With the current allocation process, R&D and marketing would not receive sufficient funding to be able to support the new strategy.

Once this groundwork has been laid, the class can collectively produce a planning process to meet the needs/goals as established by Smith. Basically, the class needs to produce a governance process for IT decisions. How this could/should be done are outlined in the next section.

Discussion Question

Develop an IT planning process for ModMeters to accomplish the demands as set out above. The first step in this process is to clarify the demands on IT and the resources that will be needed to accomplish them. "Programs" of work should be developed to specifically connect with the business value they will deliver (e.g., enabling the company to go global, developing the new customer channel, complying with government regulations). Each program should identify the value to be delivered, the business sponsor and stakeholders involved, the IT resources that are needed, and any prerequisite work that must be done. Conflicting work should also be identified (e.g., if Tompkins wants to do something in manufacturing that would conflict with the work being done in one of the enterprise projects.)

IT should also be asked to identify the internal projects it must undertake to ensure the infrastructure, info-structure, and architecture to support these new initiatives. The goal should be to identify "chunks" of value that can be delivered to support the business in meeting its objectives.

The second step is to align business and IT work with the company priorities. Here, it is important that *all* stakeholders be involved in deciding which programs of work should be done first. At this stage, using some sort of balanced "bucket" system of prioritization is effective. That is, different types of projects (e.g., business-enabling, infrastructure, business improvement) should be prioritized first against each other and then relative to the top priorities in the other buckets. Wherever possible, compliance projects should be integrated with other desirable programs of work. However, there may be a residual that simply *must* be completed and this should be identified. A steering committee consisting of the CEO, CFO, CIO and all business unit heads needs to be created to make these decisions. In this way, responsibility for business priorities is placed in the hands of the business. Next, the business must also decide how much it wants to spend on IT. This will, in turn, determine where to "draw the line" on which projects get accomplished.

Part of the process of understanding the value of each program and prioritizing will involve identifying the success metrics for each program. These should be framed in business terms (e.g., number of global sites up and running etc.). Again, these metrics will vary according to the type of value that will be delivered. Ideally, successfully achieving these metrics should be the *joint* responsibility of the IT program leader and the business sponsor and they should be jointly held accountable for results. Within IT, internal metrics should monitor and address IT's success in reducing the "spaghetti" and progress in developing and implementing an IT architecture. A "strategic imperatives" approach to metrics will likely help to align IT and the whole company behind the new enterprise strategies.

It is important to recognize that the enterprise strategy cannot be accomplished without some internal IT and infrastructure work being done. Similarly, there could be some high value, short-term, business improvement projects that will be highly desirable to complete for the business units. Balancing which projects will get done against each other is an art, not a science, and requires the participation of all business leaders and the CIO to get it right.

From this prioritization and general level of spending on IT, actual IT budgets must then be derived. Since at ModMeters, budgets are allocated by business unit according to size, a proportion of the enterprise and IT project costs must accordingly be allocated to each business unit. The alternative is to change the budget process, which will likely cause more upheaval than this company is ready for. Since all business leaders have participated in this process, and since some business unit-specific spending will still be allowed, a proportional approach will likely dampen, if not eliminate business complaints about the process. The key is to make the entire process transparent and to ensure that business decisions are made by the business.

Finally, IT needs to outline a plan to reduce its operational spending by developing a technology roadmap that will eliminate or replace outdated technology and applications. Application simplification, shared services and a stable infrastructure should all be part of this plan. The incentive for aligning business leaders behind this program could be increased IT spending for the individual business units for business improvement projects.

Appendix A
Issues Discussion

Chapter 1. Developing and Delivering on the IT Value Proposition. ModMeters has two new business strategies and IT is integral to implementing both of them.

- The first value issue is that, while the CEO John Johnson sees significant value in these new strategies, the CFO is still committed to "keeping the lid on IT spending", and the Head of Manufacturing, Fred Tompkins only sees value in the IT that is spent in his business unit.

  The key value question to ask is therefore: Is IT going to be used for strategic, enterprise top line growth, or to improve a major business unit's effectiveness, or is IT a cost center? There is clearly significant potential for misunderstanding between the executives involved. At ModMeters, it appears there are several different concepts of the value of IT.

- The second value issue is that developing systems on a piecemeal basis has meant that the overall value of IT is reduced or declining. The lack of attention to refurbishing the infrastructure means that the bulk of IT spending (80%) is now focused on "keeping the lights on". There is little foundation for building up new ventures and everything that is added increases the operational risk of failure – at major cost to the company.

  IT is not able to be flexible or agile because its foundation is not strong. Value is also problematic because of the increased complexity and risk involved.

All of these elements of value must be prioritized and combined with the regulatory requirements which IT and the company must meet. Here, value is keeping the CEO and CFO out of jail! Timing is also an important consideration. Tompkins needs some improvements *now;* the regulators will only wait so long; refurbishing infrastructure and information must be carefully timed to support the new longer-term strategic initiatives; and this year's budget can only stretch so far.

Chapter 2. Developing IT Strategy for Business Value. This case also illustrates some of the challenges involved in aligning IT and business strategy.

- While it is obvious that IT plays a major role in delivering the new capabilities desired by ModMeters, the business strategy was developed without reference to the IT strategy. The CEO is "consulting" IT without really involving IT in an effective strategy development process. As a result, IT strategy is clearly "mis-aligned" with what the CEO now wants to do for the enterprise. At ModMeters, IT strategy has been aligned with individual business units and what gets worked on is not based on value or enterprise strategy, but on the size of the business unit involved and therefore, its political and economic clout.

- The clamor of the business units for IT work, combined with IT's operational and compliance responsibilities, means that there is a significant danger of having too many and conflicting IT priorities.

- The CFO is compounding this problem by focusing only on the cost of IT and by having an IT budget process that allocates IT resources by business unit (see also the issues discussed around Chapter 7 below). This means that there is no budget for enterprise strategic initiatives requiring IT and that the individual business unit leaders will have to agree to give up some of their resources to accomplish the CEO's strategic goals – a challenge at best.

- While the CIO recognizes that investment in infrastructure and architecture will create a *capability* that will enable IT to be more responsive to the organization's changing business strategy, this is not recognized by the CFO or the business unit executives.

Key strategic issues in this case are therefore how to: a) prioritize IT initiatives – across enterprise, business unit, regulatory, and internal IT projects and b) how to better allocate IT budgets appropriately. A longer-term issue is how to better connect the development of business and IT strategy so that the challenges faced by Brian Smith in this case are better anticipated and planned.

Chapter 3. Linking IT to Business Metrics. The biggest challenge in this case with regard to metrics is that the focus of the organization appears to be only on financial performance. The CFO emphasizes cost savings in IT and IT resources are allocated according to the business unit that brings in the most cash. There is no recognition that other types of measures – such as improved business capabilities, reaching new markets, or flexibility – might be important for the longer-term success of the enterprise.

While the company has two new business strategies, it has not developed any metrics for assessing their success or for assessing IT's contribution to their success. There appears to be no recognition that: a) IT's performance metrics might in some way be linked to the success of these strategic imperatives or b) that IT might in some way contribute to measures of organizational health other than financial returns e.g., customer satisfaction, process improvement, top line growth. Furthermore, there is no apparent connection between the measure used to evaluate IT, i.e., keeping IT costs down, and what the business wants to do. This lack of partnership is contributing to a significant disconnect between IT and the business.

Chapter 7. The IT Budgeting Process. This case also illustrates some of the pitfalls in IT budgeting that often cause frustration and misalignment between IT and the business. Since IT budgeting is a corollary to IT strategy development, many of the issues identified in the discussion of Chapter 2 above apply. ModMeters illustrates how the institutionalization of IT budget processes can undermine the effective implementation of business and IT strategy. It highlights the limited amount of the IT budget which is typically available for strategic development and how uneducated or inappropriate cost-cutting measures, either by the business units being unwilling to share in infrastructure costs, or by the CFO being unwilling to fund infrastructure upgrading, can actually *cost* the enterprise. These costs come in four forms: a) reduced development resources, b) additional costs simply to "keep the lights on"; c) increased operational risk; and d) inability to change or build on the existing IT foundational applications.

The lack of an enterprise-level IT budget illustrates by implication the challenges ModMeters will face in trying to implement its two major new strategic business initiatives with no idea where the IT resources will be coming from. In addition, it also suggests that there will be

political challenges to overcome if IT resources are diverted from Tompkin's manufacturing business unit.

The case also shows some of the challenges that are likely with budgeting processes that are built around the structure of the organization. At ModMeters, budgets have been used by the CFO to limit demand for IT resources and the allocation of these resources is not linked to enterprise business strategy or priorities but to individual business unit size and priorities.

Furthermore, as this case makes clear, the individual business unit heads, as well as the CEO, have paid little attention to IT's resources when establishing their plans. They just "expect IT to make it happen". The case shows that both *where* and *how* IT dollars are spent can have a significant impact on the implementation of business strategy and illustrates how these can both be problematic with current budgetary processes.

Finally, it shows how short-term, tactical needs can easily pre-empt strategic ones. In IT, the common practice of routinely allocating a fixed percentage of the IT strategic budget to individual business units makes it almost impossible to easily reallocate resources to higher priority projects at the enterprise level or in other business units and the siloed budgeting processes in this case make it difficult to manage the cross-business costs of strategic IT decisions.

Other Issues Addressed in this Case

Chapter 4: Managing Perceptions of IT. The misalignment of perceptions about where IT value is to be delivered and how to measure it clearly contribute to poor perceptions of IT at different levels and in different business units of the organization. Poor understanding of the IT prioritization and IT budget allocation processes also contribute to lack of trust in what IT is doing and what it is costing.

Chapter 5: IT in the New World of Corporate Governance Reforms. This case alludes to the fact that some IT resources must be allocated to achieving regulatory compliance. It also suggests that problems with information and a lack of architecture may be making it more difficult to comply efficiently with regulations. The lack of processes suggests that there is a need for a better understanding of responsibilities and accountabilities (i.e., governance) for delivering value.

Chapter 6: Creating and Evolving a Technology Roadmap. This case suggests that ModMeters has a patchwork of different technologies and that this is increasing operational costs and limiting what can be spent on strategic development. It also illustrates how planned investment in infrastructure (i.e., a technology roadmap) is part of developing an effective foundation for new business strategies.

Appendix B
Organization Chart