From experience and talks with many of our customers, we know that quite a few IT managers wish there were more hours in a day than just 24. Today, they have to deal with many challenges, of which keeping the lights on in their datacentre alone is a daunting task in itself. In addition, they face rapid changes both in technology and business, forcing them to make choices fast, sometimes without knowing what the real consequences are. Moreover, there is a lot of pressure on the IT manager from the business to innovate and offer flexible services to end-users.

One major challenge for the IT manager is staff. More and more IT organisations experience a skills gap. IT stacks have become broader, deeper and more complex and in the meantime it has become increasingly difficult to get and keep skilled staff. Moreover, the better skilled workers have a higher labour cost, and the chance of employees looking to see where the grass is greener is increasing.

Secondly, there is the growing demand on the business to add value instead of offering technical services. This requires the right alignment between business and IT, a well-publicised issue which seems to be complex in day to day situations. It requires speaking the same language and adopting non-technical KPIs across the organisation.

Another major theme today is security - every organisation is vulnerable. However, as security is mainly seen as a cost centre and necessity, it is not always easy to get it on the board’s agenda. Still, it is crucial to have the right measures in place, as a breach can be disastrous for any organisation, especially in view of increasingly stringent laws on data leakage.

Finally, there is the issue of agility. We have come from the monolithic mainframe via the more flexible client/server systems to today’s cloud computing. The cloud promises agility and flexibility. Still, there are major challenges in selecting the right cloud platforms for the right workloads.

These and other developments create a new situation for the IT manager whose role in the organisation and the IT department is changing rapidly. This guide from Proact offers various insights in this changing role and provides practical tips on how to take advantage of both of these challenging and exciting trends.
The future belongs to the curious. Striving for the perfect balance between exploitation and exploration is key for the modern IT specialist. We call it the chemistry between business and IT. He or she needs to encourage fresh and bolder investments in knowledge, infrastructure, systems in the management of these.

The people who dare to ask questions and are willing to research can be successful.

- What business and IT requirements are necessary in the future?
- What role does the cloud, including automation and orchestration, play in there?
- How much will the IT specialist need to elevate their role towards 2020?
1ST PLATFORM

ARCHITECTURE
- silo based approach
- waterfall development methodology

SKILLS
- managing IT
- task driven

KPI’s
- reliable data delivery
- business continuity

CUSTOMER EXPERIENCE
- department of 'NO'
- technology as an end

FEELING
- cost driver / money spender
- of the MT preventing business

RESEARCH FACT
63% of IT departments find migrating from 'legacy systems' created during the mainframe a challenge

63%
2ND PLATFORM

ARCHITECTURE
large scale IT projects
hybrid infrastructure

SKILLS
keep IT processes going
short term focus - result driven

KPI’s
Service Level Agreement (SLA)
short term focused / result driven

CUSTOMER EXPERIENCE
business relevant department
cloud as an end

FEELING
reactively supporting
the business

ON-PREMISE VS. CLOUD

RESEARCH FACT
By 2020 mobile-connected tablets will generate
nearly eight times more traffic than in 2015.
Guide: The changing role of the IT manager

3RD / 4TH PLATFORM

PUBLIC CLOUD

PRIVATE CLOUD

HYBRID CLOUD

ARCHITECTURE
hybrid cloud: best of ITaaS
agile development (DevOps)

SKILLS
managing people
IT investments linked to business value

KPI’s
eXperience Level Agreement (XLA)
plan based on value and risk

CUSTOMER EXPERIENCE
department of ‘YES’
cloud is a means to an end

FEELING
credible business partner that
is in control

RESEARCH FACT
53% of IT-professionals at Dutch organisations find
a hybrid cloud deployment model most suitable
Your role as an IT manager is changing, as are the roles of the people in your department. In the old days of IT, we used to work in silos. What happened in another silo was another person’s problem. As long as your part of the silo was properly functioning, you were doing a great job. If you still stick to this approach, you will get into trouble as many of your competitors innovate. They create competence centres for user and customer experience and mobility, with multi-disciplinary teams that come up with innovative and successful ideas.

This also leads to new requirements for staff. What is needed today is a workforce with a T-shaped profile. Until now, the education system has been producing I-shaped students with deep disciplinary knowledge. T-shaped professionals however are characterised by deep disciplinary knowledge in at least one area, an understanding of systems, and the ability to function as adaptive innovators and cross the boundaries between disciplines. The I of the T represents the deep knowledge of a person while the T-bar represents the ability to collaborate across a variety of different disciplines. To contribute to a creative and innovative process, employees have to be able to fully engage in a wide range of activities within a community that acknowledges a member’s expertise in a particular craft or discipline and shares information competently with others who are not experts.

In today’s and tomorrow’s world, it is very important to be able to handle information from multiple sources, advance professional relationships across different organisations, contribute innovatively to organisational practices, and communicate with understanding across social, cultural, economic and scientific disciplines.

For the IT manager in particular his or her CQ or ‘curiosity quotient’ – a term coined by marketing and brand expert Sarah DaVanzo – may be more important today than IQ or EQ, as innovation and creative problem solving are major themes in the near future. Obviously, it helps to be curious and to talk with the business, colleagues, analysts and vendors about the challenges and trends in the market. This will help making the right choices for now and in the future.
Architecture & tools – from silos to the hybrid cloud

- For any IT manager, change is the mantra today. On the one hand, you still have to deal with your silo-based information systems with their CLIs, RPOs and IOPS and on the other, there is pressure from the board to innovate by using cloud technology, DevOps, service design and experiments in order to remain competitive in the future.

Looking back where IT came from, you can distinguish four platforms that each have their specific characteristics. In terms of architecture:

The first IT platforms with their mainframe computers were silo-based. There was a strict separation between functions in the IT department that operated as individual entities. There was little to no communication and shared responsibilities between the silos.

Looking at tools and development, we can distinguish the same four platforms.

The second platform is less traditional and focuses more on IT and organisational effectiveness. This platform is characterised by an integrated approach, using structured methods such as ITIL, PRINCE2 and BISL, plus hybrid infra-structures. Capacity, performance, security and risk are the major issues. The IT department is very busy keeping all the lights on every day. For the IT manager, organisational skills are key to support that. There is little time and opportunity for innovation.

The third and fourth platform are the typical platforms of the future. By deploying innovations such as the hybrid cloud, competence centres for specific activities, automation and orchestration and self-service portals, these platforms enable us to focus on meeting customer expectations and customer satisfaction. Companies that have entered this stage use the cloud as a means to an end instead of an end itself. They know and feel the rhythm of the business and go along with it.

The first used the waterfall methodology for application development. This sequential, non-iterative model regards progress as a steady downwards flow (like a waterfall) through the phases of conception, initiation, analysis, design, construction, testing, production/implementation and maintenance. Every phase must be completed before the next can start.

The second phase is characterised by large scale IT projects, with long lead times. ITIL, PRINCE2 and BISL are the main methodologies.

The third and fourth platform are much more business focused, using agile development (DevOps), service design and experiments to better align with business requirements and business processes. Obviously, there are no strict boundaries between these four platforms. There will also always be a need for first platform functions, as there always will be legacy applications and legacy functionalities to maintain. The thing is to prepare for change by ensuring you and your team have the right expertise and skills to move from platform to platform and support the business in the right manner.

“Change is the only constant in IT today. Therefore, it is key to be well prepared for change, have the right expertise and skills and select the right partners in order to support the business in the right manner.”

Bertus Doppenberg, Operations Manager Managed Services, Proact
CHAPTER 5

Key performance indicators – data or customer first?

What impact do the four platforms from chapter 4 have on the IT department?

In the first platform, KPIs were very much technology driven: the IT department focused on matters such as latency and preventing packet loss in order to provide reliable data delivery to the business. RTO and RPO are very important elements of business continuity plans for these platforms. In the second platform, there is more concern for quality and transparency of the service. This can be realised by creating service level agreements that describe what is delivered under which circumstances and for what price.

In the third and fourth platforms, KPIs are much less technical and much more targeted at the end-user. Customer satisfaction scores are more important than latency numbers, and service level agreements are replaced by experience level agreements that describe what an end-user can expect in terms of availability and support. Organisations that operate these platforms focus on issues such as time to operational value and time to market and creating plans based on value and risk. They move from a data-first to a customer-first approach. For the IT department, the challenge is to adopt the role as an advisor to the business.

This trend requires special attention for new areas. One of these areas is rethinking security. Looking at the four platforms, it is clear that the first one was secured by design. For example, mainframes were closed systems with easy to regulate secure access. With the emergence of the second platform, systems became open for a wide group of users. Security focused mainly on protecting the perimeter of the network. In the third and fourth platforms – with infrastructural assets proliferating widely – securing the perimeter is hardly sufficient anymore. Organisations now need to secure the source by offering single sign on for end-users and implementing security by design in their architecture and development.

“For more and more organisations a customer satisfaction score is more important than latency numbers. Therefore, service level agreements are replaced by experience level agreements that describe what an end-user can expect in terms of availability and support.”

Bertus Doppenberg, Operations Manager Managed Services, Proact
As IT is changing rapidly, so are the roles of the IT manager and the staff of the IT department. For the IT manager, the major change is that he or she must make the shift from managing technology to managing people.

In the first IT platform, the IT department was very much task-driven with a strong focus on processes and structure. The staff had extensive technical knowledge but this was separated from other functions as individual staff had an I-shaped profile, i.e. employees were experts in their own fields with little knowledge of adjacent areas.

In the second platform, staff are very busy with keeping IT processes going. Most of the time (some 80%) is spent on keeping the lights on. The rest of the time is available for new initiatives and innovation. Keeping the lights on requires the right organisational skills.

In the third and fourth platforms, other skills are required. In addition to in-depth knowledge and expertise, it is key that employees understand what the business needs. Therefore, the right mix of I-shaped and T-shaped profiles are necessary. In today's IT departments, all employees need a basic understanding of IT architectures and business knowledge in order to be able to advise the business on the right choices. Employees with T-shaped profiles are required to boost creativity and innovation, while I-shaped profiles are able to run traditional business processes that depend on legacy systems and applications.

For the IT manager, the challenge is to create a balanced team with the right profiles and expertise to support both existing processes – including many legacy functions – and new and innovative initiatives that will take the business further.

In addition to the team's profiles, the role of the IT manager is also changing. The IT manager has to be able to manage a team of I-shaped and T-shaped employees but needs to be T-shaped him- or herself in order in order to be a true business partner to the managers of other departments. Every department needs to understand the impact on IT, this requires close cooperation between the IT manager and his fellow managers.
CHAPTER 7

How to become a department of “yes”?

Many IT departments are still struggling to offer the right services to the business. They have to support existing processes and legacy environments on the one hand, and control compliance-related requirements on the other. Therefore, there is little time for innovation. This leads to a situation in which the IT department easily becomes the department of “no”. Requests from the business are denied because of budget and technical restrictions.

The real danger is that the IT department loses its position and Shadow IT takes over. After all, it is very easy for marketing and HR departments to buy CRM and HR solutions from the public cloud themselves. See also the article “Shadow IT: Threat or opportunity? And how to handle it”.

Therefore, it is key that IT departments transform themselves into departments that embrace developments and are able to say “yes” to the business. The IT department must become a beacon of innovation and achieve the balance required between current micro projects and a macro overview of IT.

Three ways to achieve worldwide collaboration, learn from users/Shadow IT, and to facilitate policy-based collaboration throughout the organisation include:

1. **Think in terms of services.**
   Customers – and the upcoming millennials in particular – do not think in technological terms like “applications” and “databases”. They are tech-savvy and want to use a service that will enable them to do their work well, whether as a marketer, HR employee or in another role. Self-service will play a bigger and bigger role for these end-users: they want to be able to press the buttons themselves. It is the responsibility of the IT department to respond to the above by providing concrete services that make this possible on the basis of clear SLAs.

2. **Make sure that collaboration in IT teams is optimal.**
   When wanting to supply services, it is no longer practical to have a number of different, separate IT teams working on applications. This results in barriers and power struggles between individual teams. With the above in mind, it is important that the environment offered by the IT department also ensures that a transparent overview is maintained, because of which teams are aware of each other’s activities and more synergy is achieved.

3. **Automate processes wherever possible.**
   Armed with cloud technology, orchestration can be used to offer end-users services efficiently and effectively. In this way, orchestration generates efficiency advantages for the IT department – which gains more time to spend on strategic subjects – and advantages for the end-user, who has easier access to IT services. Once processes have been automated, it also becomes easier to create a life cycle for applications. An application is always in the cloud environment that is most appropriate for it at that point in time. As a result, greater cost efficiency can be achieved for each of the applications.

In this way, a service-oriented approach, combined with reliable collaboration in IT teams, can accelerate innovation in an organisation and ensure that the IT department becomes the department of “yes” and is regarded as a credible business partner who is in control.

“The IT department must become a beacon of innovation and achieve the balance required between current micro projects and a macro overview of IT.”

Bertus Doppenberg, Operations Manager Managed Services, Proact
As an IT manager, you can often feel like you are doing all you can to serve the business in the best possible way, while at the same you are having to deal with a thousand things thanks to an IT infrastructure that is ever increasing in complexity. Despite all your efforts, the IT department is still regarded as a cost centre.

What can you as an IT manager do to reduce the negative impact of this daily struggle and start finding ways to end it?

Be curious
First of all, it helps to be curious. Talk to the business, talk to colleagues, talk to analysts and talk to vendors about this struggle and challenge them with the answers you have in mind. It is very important to understand what is happening. Next, it is wise to be bold. Looking at the huge impact of new technologies on business models, choices have to be made. This does not necessarily require steps in the dark. Consider asking a trusted advisor with the right methodologies and approach to determine how to enter the future. This advisor can also help you prepare in making the right choices.

Change the 80/20
One of the main goals will be to turn the 80/20 rule around. This rule says an IT department spends 80% of its time on keeping the lights on and 20% on innovation. Every step that is taken to lower the 80% and increase the 20%, is beneficial for innovation and competitiveness. A prerequisite is that you know where you are now. Start determining your maturity with regard to IT, security, compliancy and risk and create a plan for tomorrow, which included cloud technology. Ensure you pick the right cloud solution for the right workload, be it on premise, in a public, hybrid or private cloud. This will definitely help you sleep better at night and enable you to become the business partner you want to be.

Find the right partner
Realising that your IT department needs to transform and understanding how to do this can be a huge challenge. With the help of the right partners and with the right tools and methodologies, this process can be supported in such a way that procedures, goals and milestones are clear. Proact has helped many customers with this transformation and offers the skills and expertise to help IT departments transform into their new role.
Whatever your career aspirations are, there are a number of actions you can consider taking to develop your career.

1. **Explore and stretch yourself.** Actively seek out opportunities to get involved in IT and business decisions that create value.

2. **Plan your career.** Write a personal development plan. The practice of writing and discussing your plan with a mentor or coach will help to develop your thinking and open up opportunities.

3. **Transform your company and IT department.** Be revolutionary. Grasp the position to make a difference for you and your organisation. Make sure you get the support from the business stakeholders within the company. If they are not open to change at all, explore further and go somewhere you can make a mark and develop yourself.

4. **Focus on (soft-)skills development.** Emphasise communication, leadership, influencing, networking and empathy. In today’s and tomorrow’s world, it is very important to be able to handle information from multiple sources, advance professional relationships across different organisations, contribute innovatively to organisational practices, and communicate with understanding across social, cultural, economic and scientific disciplines.

5. **Add value to business innovation.** Develop your business skills and understand the needs of other departments within your business in order to bring them the IT innovation in an agile way.

6. **Don’t get lost in technical details.** Make sure that this is covered in the IT team by the people who are responsible for this – so delegate this. You as an IT manager need to be able to translate and connect this to business goals and outcomes.

7. **Manage people, instead of IT.** The IT manager has to manage people instead of IT with a basic understanding of IT architectures. Create a culture that is open to creativity and business innovation with a healthy balance between explore and exploit.

8. **Leave your desk, interact with other departments.** Get to know the divisions and other departments. Work out how you can proactively help them deliver their objectives and become the department of “yes” that follows the rhythm of the business.

9. **Stay in dialogue with the board - how can IT enable business agility?** Identify what helps them and align your KPIs with the goals of the business so you become the credible business partner that is in control. Pitch your ideas or initiatives in a crisp and clear way. If you cannot explain an idea in five sentences when taking the elevator a few floors up, your idea will never reach the top floor.