

SERVICE DELIVERY AT LULEA UNIVERSITY OF TECHNOLOGY, THE SECOND WAVE

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Keywords

IT-as-a-service; IT-Board; Invoicing; Affirmation.

1. EXECUTIVE SUMMARY

This second paper will present what happened with IT-delivery after centralization during an economically difficult period in the university's history. It will tell how the late introduced IT-government (The Demanding Board of IT) worked and made a change in both the internal discussion climate and how the attitudes changed from blaming to collaboration. It will present some of the good statements taken. The paper will then shortly discuss the conflict between a fully paid quality dependent service delivery and the public service's way of looking at costs, payments and management. It will present some updated SLAs (Service Level Agreements). But also how we removed all internal invoices by replacing them with a direct transfer system, reducing internal handling costs from 40 to near 0 Euro per invoice and how we solved the invoice information. Of course it will resume some of our new mistakes.

In the end this paper will question if a detailed IT-price list leads to sub optimization.

1.1. Background

The paper is a free standing follow-up from a paper published as a poster at Eunis Conference 2006 in Grenoble with the title "From technical specification to service delivery". That described how we reduced IT-costs with 15% (goal 23%), introduced ITIL (Information Technology Infrastructure Library), described many standard services in SLDs (a sort of Service Level Agreements) and introduced rented computers in order to standardize the computer environment. It also told how we handled fines and penalties and what mistakes we made during that revolutionary period.

This will be presented by the officer of internal customer relations from the self financed IT-Service unit at Lulea University of Technology, Sweden.

1.2. The headlines

Who we are; IT as a service; The Demanding Board of IT; The conflict; Invoicing removal; Web affirmation

1.3. Conclusions

IT is essential to have an IT-governance ruled by the enterprise - as responsibility for statements taken falls back on the business. It is also important that the IT-governance works forward and diminishes tendencies of blaming and it is desirable to have some way to express power from the IT-board.

It is a major change to introduce services and quality connected to a prize - both for the delivering part and the customers.

It is almost necessary to have a business system running, which can handle bills, registered computers (in work or in store), application sale etc.

2. WHO WE ARE

Lulea University of Technology (LTU) in Sweden is one of the northernmost technical universities in the world. It is situated at the northern part of the Bohtnian Bay close to the arctic circle. Due to the downwind effect from air masses coming over the Scandinavian Mountains from the Golf Stream, the climate gives relatively warm summers up to 28 C some days. The university has about 12000 students, two faculties and 1400 employees. The main area is Technical but we also have Learning, Music, Nursery and Theatre. The turnaround is ~120 MEuro. The IT-Service is a central self-financed unit delivering both central administration systems and daily it-service to the departments. The turnaround is -5 MEuro.

And - as mentioned in the poster of 2006, the centralization and reorganization had hurt both the spirit of the unit and the internal inheritance of routines at the IT-Service unit. This is where this paper starts.

3. IT STAYING PUT

During 2008 the economy of the university was in a bad state due to several years of under-financing in the education sector. The courses had for a number of years been too small and too many, the student intake rate showed a decrease and the university (LTU) had to clean up its economy during 2008, which it also did. But this also implied that the IT-Service unit was set on a low budget. "Survive! Don't fix anything!" was the informal order. A consequence was that even normal investments were reduced to a minimum. This was a calculated risk, as mailing system; fileservers and desktop computers were growing old - medium age 6 years in some places.

4. IT AS A SERVICE

IT is normally thought of as an operational delivery. We have and are changing that to be a service delivery with a measurable quality. That will give the customers a reliable computer tool and us, the IT-Service unit, the possibility to use standard equipped computers minimizing the maintenance diversity and as a result minimizing the costs. The importance of Service Level Descriptions cannot be underestimated as it changes the attitude towards computers from a technical cozy thing to a commodity with a known uptime or known replacement time. This commodity shall be a helpful tool for teachers, researchers and the staff, as applications and not the technical computers are expected to be in focus tomorrow. ITS has therefore emphasized that we deliver services - and not only technical operations. Details of some Service Level Descriptions are available in appendix.

5. THE DEMANDING BOARD OF IT

The IT vision and IT-plan from 2004 had suggested two boards, one on a strategic IT-level and one, a demanding board. The latter should report to the former and also look into services needed. - In practice only the Demanding IT-board was established and one of the deans settled as chairman. The members were 5 IT-coordinators selected from 13 possible different departments, one student, the CIO, the CITS and the head of the SLM-process. (Respectively Chief Information Officer, Chief IT-Service, Service Level Management).

The board started in beginning of 2007 at a time when the quality of delivery was at a low level. The computers now free from virus and hackers were slow in upstart and many users felt that it was a lot of bureaucracy involved, when they wanted to use or change their dear working facilities. Installations in the student labs didn't work due to misunderstandings. The well-informed local it-technician had now been replaced with a central impersonal delivery, claiming tests of acceptance instead of small talk between the teacher and the technician.

Earlier, before the introduction of the board - the IT-Service (ITS) had initiated a customer group, where IT-coordinators from the departments met and confronted ITS. These meetings were at that time full of negative criticism, often repeating already solved issues and a place to express frustration over centralization, bureaucracy and bad delivery.

The Demanding Board of IT took a completely different road. The responsibility for the secretary function was laid upon the IT-Service and I personally grabbed the opportunity to be its officer of the board. I had in view to try to make this Board to something more than a discussion group. The chairman was also very interested in a more positive and working forwards attitude. We therefore shared the same vision and started the first meeting emphasizing - that this Board should work with the same rules as a normal board does in the Swedish governmental sector management area following a tradition grounded in the 1600. This means that members are forced to be present at meetings unless they are on a travel or sick. It implies that all decisions will be made by majority voting - after a prepared objective presentation normally made by the officer. All members are responsible for a decision unless they have made a formal reservation. The objective officer is not allowed to vote but may state his reservation. We ask the juridical expertise at the university to present this, which he skillfully did. We now had a solid ground to start with.

We continued with an agenda always presented in advance, where each paragraph had a suggested formulation for the decision. Impulsive suggestions or unprepared issues were normally not accepted. Blaming each other or blaming different organization units were also rejected. In the beginning some speakers took up old issues, but was kindly asked to be objective, define when, where and what - as it otherwise was impossible to judge or correct errors. Very soon the board fell into an informal positive solution focused mode. The chairman was very good in keeping up the mood of the board and urging for positive solutions. The IT-coordinators in the board were also in reality more interested in improving the service than in cutting costs or blaming the service.

The objectives of the board are in appendix. In practice the board worked as a place to take common policies with majority votes. Most people living in a democracy tolerate to be voted down, as long as they have been heard. This is also a more efficient way to move things forward than the need to always reach a consensus. But of course you try to strive for a consensus. - And - decisions shall be made by the business - not by the service.

One of the first decisions was to give a working group the commission to look over how to work in relation to a new management model just introduced to the university, (more of that later). The second commission was to scrutinize the services, qualities and prices presented by the IT-Service.

Early important statements were:

- Common file formats for exchange of information inside the university were defined.
- Reasonable quality levels were defined from the customer's point of view. (ITS was at that time far from fulfilling them.)
- Number of guaranteed versions of the same application inside the agreement was reduced to two. (Older and newer versions allowed to full cost without guarantees)
- Penalties, "within 14 days explain - how not to repeat".

Other important statements concerned the behavior of ITS:

- "The board thinks it is reasonable":
 - That ITS takes more responsibility in the computer rooms
 - That ITS takes action to enforce better printing functionality
 - That response time on the desktop is up to date and please present how
 - That ITS first response to customer is within a few hours

And some statements said:

- Please urgently present a solution for better mobility inside the university
- Please present the costs for increasing all students' mailboxes
- That costs setting in prices should be open for discussion and be able to review and that the price also should cover a long time steady state delivery and the in-service training needed.

Later the working group acknowledged the pricelist suggested by IT-Service and made a recommendation to the board to pass it on to the Principal for final decision.

More working groups

- One group was established with the commission to solve the dissonancy between the PhD students in computer science and the IT-Service delivery - but with an eye on the needs of the whole university
- One group was established to solve the customers need for affirmation

The board also said yes or no to closing down some systems like modem pool, news, computer nets etc.

In the end of June 2008 the board made four final statements to the university in order to solve some conflicts and to improve the board.

- “,,The Demanding Board of IT will state that the last year has proved the need of an IT-board as function to solve conflicts and increase collaboration
- ,, The board suggests that the commissioned text shall be changed so it equalizes with the common form for decision at the university
- ,,The board ought to be able to function as a government for IT at the university, meaning including handle strategic questions and be advising to the Principal and the CIO
- ,, The representation needs to be with a dean (or vice-rector) as chairman and the members representing the core work of the university including the students”

(These sentences above are translated and rewritten but will hopefully give the core of the message.)

6. THE CONFLICT

Public Management versus Service Delivery. Simplified, most employees in the public sector have the experience: - that a service unit in the public management area like a university, has after demanding money for a Volvo, been given money for a bicycle but is expected to deliver quality for a Rolls Royce.

This very simplified statement is, although not always true, setting the finger to the point: the difference in approach to service delivery from the Management view to the ITIL view of quality and price. ITIL (The Information Technology Infrastructure Library) is used by ITS and accepted by the board.

The public sector often falls back on experiences from a fixed budget, fixed commission and too seldom has felt the press to cut off inefficient parts. It often states what shall be delivered and sets the budget, but misses the level of quality - expecting 24*7 and immediately response. The management model introduced by the university initially also to some extent missed the connection between price and quality. A commercial business in competition knows that it must balance the quality delivered against the price possible to achieve. It also knows that a price is not the same as the sum of the costs, something the management thinking often misses.

As our university started to introduce a central management model for “process thinking”, this conflict was shown in discussions and reality. The management model had partly the same issues as the Demanding Board. It became unclear who had the real responsibility.

This also implied that a lot of discussions and making awareness took place. For a lot of people outside the discussion groups, this was looked upon of as a lot of meeting hours just presenting amounts of text pages. But in the end a number of managing areas were born: the Web, the Human Resources, the IKT working place etc (IKT - Information, Communication and Telephony). In the start some owners of the managing areas thought it adequate to demand only one common Service Level Agreement (SLA) for their whole Management Area. But this thinking could not be accepted by the ITS, which claimed one SLA (Service Level Agreement) for each service we should deliver. Especially as the services from e. g. the Web management area spread from large Content Management Systems to small cardboard applications like Captivate or Camtasia.

The best thing about the management model is that each management object defines an owner/responsible of each wanted service and therefore also states a buyer. That buyer is forced to optimize with his/her resources and make rational choices.

A bad thing is that it makes many object owners think they can both set the quality level and the price. On the opposite, ITIL (IT-Infrastructure Library) delivers services with different levels and where related prices are reflecting the bought service.

Another thing to consider (in my view) is that it is an old-fashioned thinking - mirroring a controlled world where five-year plans may be made and followed. Example: A suit is planned, ordered, tailored delivered and paid. It probably has an outstanding quality on the armpits, but no place for a later suddenly introduced cellular. That may be fixed but will cost a lot of money.

This thinking doesn't give space for the modern always-changing reality in infrastructure and cheap confection delivery. Probably it would be cheaper to buy a new suit due to the new PDA/cellular demand than to reshape the old suit.

I strongly think we must consider the consequences of the always-changing reality more and more in the future as Google and others stores our files, delivers our email, supports collaboration etc much cheaper than we may do ourselves. Possibly even the computer power will be decentralized in a way we today only can vaguely visualize.

In the end I think the management and ITIL models can work together if the managing model reduces its demands to negotiate services and their levels and doesn't try to manage the delivered service in detail.

7. UNSATISFIED CHIEFS OF ADMINISTRATION

From 2005 the IT-Service has transferred most of its technical deliveries to service deliveries, described in a poster session at Eunis 2006. Most services now has a price and a quality.

It is told in the books of ITIL, that as you start to describe and charge quality in a service, the customer also will expect and control that quality. And - now following the book - our customers wanted to see both what they paid for, the delivered quantity and the related cost. - But in our case we especially lacked basic quantity data. To our regret all the basic information about number of users at each department, number and type of computers, number of computers in different student labs etc, lacked data with quality. In reality it didn't exist any infrastructure capable to send an invoice and update the available business storage, nor for computers, nor for applications or prices. We both lacked databases over configuration items and over software. So ITS started (and is still) updating and correcting its information in Excel sheets, in text files and in databases.

At the departments both the administrative chiefs and the IT-coordinators were unsatisfied with the poorly developed follow-up possibilities available. Notify that "unsatisfied" is a great underestimation of their feelings.

The delivery to the departments did earlier produce a lot of paper invoices, which each had an administrative internal cost of approximately 40 Euro. The total amount of internal invoices from IT-Service to Lulea University of Technology was shown as a quarterly one-inch package and during one year the handling of these paper invoices did raise a cost of some 40 000 Euro.

The charging was made by way of an application, which automatically printed paper invoices from negotiation data. These invoices was both sent to the customers and delivered back to the unit for economy. In reality the sums on the printed invoices were once more manually typed into the input file to the economy system, Agresso. The content was also static during the year, which is convenient but does not initiate cost hunting.

During 2007 the departments increased their demand for better overview and also questioned the basic data. They questioned details up to the level that the IT-Service occupied almost a 25 % fulltime employer with updating and correcting the charging.

A project was therefore started by the Demanding Board, which lead to that IT-Service developed a system, which today satisfies both the customers and the ITS and it also reduces costs in administration.

7.1. In short the idea.

Don't do manually what a computer can do!

Don't send invoices! Just transfer between the correct projects.

Don't send invoice information! Just publish the information regularly.

Don't make credits backwards! Just charge negative.

7.2. In practise

We made a website with overview of all departments. Each department has a table where the projects of each department are the lines and the different groups of services delivered are in the columns. Every cost and every item is shown with the connected user and the project number to charge.

We also made a very simple input system. Each person at IT-Service, who wants to charge a service, simply makes a text file with #-separation. The file has only 7 parameters.

Date# to project# from project# sold by user# bought by user# the sum# text string

7.3. The web affirmation interface

From the input file to the economy system ITS developed a web interface, where each department can view its ordering status. What gives costs to a project, who is the source of that cost and how much is it?

The answer received was enthusiastic. For the first time in two years ITS got a widespread positive response. The website also justified the new concept, where all services just were withdrawn from a project owned by the customer. This authorized the possible to remove the costly internal manual invoice system. There is no need for such a system inside a common organization. A second not expected benefit was that ITS suddenly discovered miss charged or not charged services to a value of -100 000 Euro, 2% of the turnaround.

8. MISSTAKES

Of course we made mistakes. The university made (in my view) the mistake to focus on costs without looking at benefits. Efficiency in the it-service area was set before effectiveness in the enterprise. This is very common in governmental bureaucracy (it hurts to pay money so you don't invest) although you may have some understanding when you are out of capital. The university also set a buying limit to 1000 Euro for administrative units including the self financed IT-Service(!). A department had the higher limit 10000 Euro. For purchase above that level you had to get an approval from the chief of administrative affairs. That would have been ok, but for the implementation that a computer-lab ordered within the limit of a department had to be affirmed another time as it was above the limit for ITS. Another bureaucratic implementation was that as ITS was not allowed to depreciate computers - it could neither depreciate computer labs with 16-40 computers. A debt problem as we let out computers on hire to the enterprise.

The demanding board of IT made only one mistake in my view. It lacked "follow up" consequences when a statement agreed upon sometimes was left without action taken.

The IT-Service made many mistakes, the cardinal not to have a configuration item database running and to not have a sale system available. All was done manually and still is.

Another was the mistake to be too slow in delivering applications with new more efficient technology or to week to convince the university of the benefits. E.g. implement virtualization of applications and deliver more with thin clients. ITS also lacked power to measure service delivery although this was both emphasized by the IT-board and stated in the SLAs.

A third mistake was to vastly underestimate the need for manpower in the SLM process. In the beginning we only charged for costs coming from the technical delivery like operation of a server, license cost etc. But as you describe and negotiate SLAs you will find that you not only have to go back to the customer several times per year but you have to supervise outsourced services, monitor quality and follow up IT-tendencies worldwide. You also have to handle quarrel, undelivered services and return payments. And to that you also want and are expected to supervise the departments of new possibilities. This sums up.

Perhaps not a mistake but something we still deal with is the relation of manpower 2/3 at the front - the Servicedesk and only 1/3 in the back - where the services are produced and smoothed. It hurts your own back after a while.

9. OPEN QUESTION

Our system for financing the IT-delivery makes it very clear where the costs are initiated and money used. It may in practise also invite to sub optimization. But this is also a matter of maturity and the benefits are that the costs are close to the user. The disadvantage is that the costs are close to the same user and the focus may be on details of such a small part of the university economy as 2-6%.

On the other hand I think this is why you have an IT-government. It should represent and be the practical ordering function that collects and demands it-services. The IT-government should scrutinize what is useable for the departments and prizes set. It should set up the policies and solve conflicts. It should have the whole university benefits in focus, including changes in or of the payment system and of course it shall have an eye in the future.

10. APPENDIX

Objectives for the board

Common file format

Quality levels

Pricelist

SLD user

SLD robust

Affirmation

11. Appendix 1, COMMISSION FOR THE DEMANDING BOARD OF IT

Principals statement of Nov 21, 2006 /translated

11.1. Purpose

An important part of the University's IT-strategy is, that the delivery from the IT-unit shall be in form of packages of it-services. The advantage with service orientation is among other things that the technology, which the IT-unit can deliver and support, is packed in form of it-services described from the perspective of the business. A definition and packing of it -services fulfils several purposes e.g. by tying the costs to a special service and setting the prices right. The it-services shall also be classified after how critical they are for the core business with the purpose that the right priority should be possible to link to incidents and continuity planning. The purpose of the Demanding Board of IT is to optimize the total supply of it -services and to adapt and adjust this to the needs of the business.

Purpose

- Decide, shape and set price to the it-services of the university
 - Decide which it -services that shall be available; how these shall be shaped to best suit the core business and the infrastructure and set the prices.
- Determine the right to use and how to handle costs of each it-service
 - Decide how a certain it -service shall be paid. E.g. some costs may be handled as overhead costs and be financed as a common cost of the university and some will be paid by the single customer. The right to use may depend of how this special it-service is paid.
- Be responsible for a well dimensioned supply of it-services
 - By coordination of it-services and applications an optimal handling may be applied on the established supply. The commission aims to guide the supply of it-services to the right level from the point of view of the university business.
- Report the total amount of it-services to the Strategy Board of IT
 - Regular report to the Strategy Board of IT of how it-services and applications are used within the university. Through this reporting the Strategic Board of IT may receive facts as a base for control and strategic decisions. This process will also give the Demanding Board of IT control of the demands and the extent of use of services and applications.
- Root and communicate the decisions made
 - The Demanding Board of IT shall act to communicate and get support for its statements by the interested parties concerned by statements taken.
- Contractors, suppliers and their delivery
 - The Demanding Board of IT shall be part of decisions made concerning chosen supplier and the way the it-services are delivered.
- Prepare errands for the Strategic Board of IT
 - The Demanding Board of IT shall prepare the errands that are initiated by the Strategic Board of IT

Members

- Dean (1) Chairman elected by the Principal
- Student (1) Suggested by the Student Unions in collective

- CIO (1)
- ITSO (5) IT-coordinators
- CITS (1) Chief of IT-service
- SLM-responsible (1) within the IT-service
- Meeting frequency 6-8 times a year

12. APPENDIX 2. COMMON FILE FORMAT FOR EXCHANGE OF INFORMATION

Statement Nr 5 from April 10, 2007 made by the Demanding Board of IT at Lulea University of Technology, concerning:

Presented by: Bengt-Olov Jansson

Decision: Exchange of information in files within Lulea University of Technology shall normally happen by use of the file formats stated by this board. A teacher may although in a single course if necessary make exception from this rule. Information about actual file formats shall be available on the University's web site. This rule shall as well be applied to the communication between units as to the communication between teacher and students.

During the spring 2007 and forwards PDF, Text and the Standard formats of Microsoft Office 2003 are stated.

Comment: It is a problem that MS Office 2007 uses another file format than MS Office 2003. Mostly students have the new Office 2007 installed which conflicts with LTU's teachers as they and the rest of the university actively stay with Office 2003. To support the teachers, this board states a standard for the whole university and not only for the employees.

(To reduce conflicts - the ITS very soon installed a common translation script between Office 2007 and 2003. My comment.)

13. APPENDIX 3. SERVICE PRICE LIST (SERVICE PRINCIPLES)

Statement Nr 5 from June 1, 2007 made by the Demanding Board of IT at Lulea University of Technology, concerning:

Presented by: Krister Engberg

Decision: The board decides to approve the principles for:

Service conditions, quality

Service principles, prices

Service content according to Principles of Service, se below

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Principles of Service

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The Board thinks that the levels stated below are reasonable from the business point of view concerning the use of IT at Lulea University of Technology.

Service conditions, quality

Time from first customer contact	First recall	Satisfied customer
Standard change	< 8 h	< 12 h or agreed time
Request outside standard	< 8 h	< agreed time
Incident	< 4 h	< 8 h or agreed time

''''

''''

14. APPENDIX 4. PRICELIST UPDATED FROM THE PRICEGROUP 081020

Services from IT-service LTU

1 Euro ~ 11 Sek

Always including support from Servicedesk

Sek/month

SLD

User services

User staff	SLD0801	133	
User Student	SLD0802		Central finance
Basic package	SLD0805		Included
Telephony	SLDi07	130	
Telephony, Installation		590	
Cellular with calendar sync	SLD0830	~ 410	Depends on type

Computing Working place (hard ware not included)

Working place terminal	SLD0806	265	
Working robust, stationary or mobile	SLD0807	408	
Working place flex (laptop), stat/mobile	SLD0808	439	
Working place research, stat/mobile	SLD0809	311	
Net-connected facility	SLD0810	154	
Student computer room, terminal	SLD0811	265	
Student computer room, robust	SLD0812	408	
Student computer room, research	SLD0814	439	

Working place services

Wireless function point	SLD0820	390	
Licence Server FlexLM virtual	SLD0822	280	
Licence Server FlexLM real	SLD0822	350	
Licence Server with dongel	SLD0822	560	
Installation of packed application	SLD0825	100	Per occasion
Installation of application, manually	SLD0825	680	Per hour
Ordering service	SLD0826	700	Per occasion
Application packing	SLD0827	>2800	

Leasing of computer hard ware

See separate list
Updates regularly

Storage, disk

Archive copy	SLDs01	8	Sek/Gb
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Storage without recovery	SLDs02	8	Sek/Gb month
Storage & Recover possibility of files	SLDs05	26	Sek/Gb month
Course disc à 25 Gb	SLDs06	200	Sek/25Gb month

Miscellaneous

Support	SLDm02	0	included
Place in server hall	SLDm04	75	Sek/rack place month
System development	SLD0837	680	Sek/hour
Web hotel Apache/IIS	SLDm07	500	Sek month
Application management	SLDm13	680	Sek/hour

Teamwork, collaboration

Special e-mailbox	SLDt01	0	included
E-mail list	SLDt02	0	included
Project room by Project Coordinator	SLDt03	1190	Sek/room month
Video-/distance studio	SLDt04		Central financing
E-meeting room Marratech	SLDt05	1250	Sek/room month

15. APPENDIX 5. SLD0801 USER ACCOUNT, STAFF

15.1. Service description

The service gives basic availability to the infrastructure of LTU in the aspect accessing different systems.

15.2. Aimed group

Users within Lulea University of Technology

15.3. Benefit to customer

Makes it possible for the user to access systems to save information, read/write e-mail, access and synchronize calendars, recover files etc. It makes allowed systems available independent of time and space.

15.4. Definition of service

The service concerns:

User account

The service includes:

User identity and password by way of the catalog service of LTU

Common login (Single Sign On) to most of LTU.SE

Personal home catalog for files charged separately after volume

Personal e-mail address charged separately after volume

Calendar function

E-mail by way of web or IMAP

Access to work place from external net, by VPN or tunneling or over Internet.

Recover possibility of user catalog and e-mail files.

Limitations:

Calendar function is only supported for Exchange e-mail system.

15.5. Quality

Goal	Limit
Open for possibility to access the infrastructure of LTU and services 24 h a day. Available during LTU's office hours	Function will be delivered within 8h or reestablished within 8h.

Contact person	E-mail	Telephone
If in need of help or error notification – do contact LTU service desk.	ServiceDesk@ltu.se	1664

16. APPENDIX 6. SLD0807 COMPUTER WORKING PLACE, ROBUST

16.1. Service description

The service gives access to operation of a computer for normal use. The hardware may be stationary or mobile, and has some freedom in choice of operating system. Network safe from hacking, virus protection and a basic application package are included. The computer is locked but more applications may be installed for a fee, e g package for each department, utilities or just more applications. Replace function is available when you are using hardware rented from ITS.

16.2. Aimed group

Applicable at Lulea University of Technology to most of the users, which want a secure, stable and effective working place.

16.3. Benefit to customer

IT-service ensures that the working place is available without trouble through the use of a standardized computer, configured in a secure and efficient way. Support and basic application package are included, in the delivery service. Additional costs will only be charged for extra applications or extra utilities.

If the customer rents computer from IT-service - the delivery quality has a higher priority and ITS delivers replacement function for bas application functionality as an extra service.

16.4. Definition of service

The service includes: A computer working place with a standardized stationary or mobile computer including service and support. Delivery of replacement functionality to at least basic functionality is given as an extra service.

The service includes:

- Basic applications according to Basic application package.
- Operating system, chosen from a list from ITS.
- To keep the system connected to the infrastructure of LTU, catalogue system, printer- and storage facilities according to the security policies of LTU.
- Applications for virus protection.
- The computer is connected to a secure net.
- Only delivered to users within the LTU catalogue service.
- Only computer hardware included in the governmental agreement for hardware is supported. Other computers need special agreements.
- Installation work is only included for hardware recommended or approved by IT-service

Limitations:

- Installation and upgrades above bas package is not included but is installed after separate order and to a fee. This is also applied to applications outside the basic package in case of computer breakdown.
- The customer is responsible for functionality test of new installed applications within 40 working hours, thereafter all claims are treated as new orders.

16.5. Quality

Goal	Limit
The service is open 24 h a day. The computer functionality is available during office time.	The working place shall be restored to basic level as soon as possible but not later than within 32 working hours

16.6. Addendum bronze, when rented hardware is used

Goal	Limit
The service is open 24 h a day. The computer functionality is available during office time.	The working place shall be restored to basic level as soon as possible and not later than within 16 h

The addition includes

- Occasional replacements function when failing. If hardware is replaced it means that central delivered applications are replaced within a few hours.
- Normally a crashed rented computer is replaced but the service may exceptionally be limited to function for bas application e.g. by way of a thin client

16.7. Responsibility

The customer is responsible for:

That installed applications have a valid license.

That test of function is done within 40 h, after that all requests for change is considered as new orders.

If bronze level is applicable - remind the service desk

Contact person	E-mail	Telephone
If in need of help or error notification - do contact LTU service desk.	ServiceDesk@ltu.se	1664

17. APPENDIX 7. DEPARTMENT OVERVIEW: CIVIL, MINING AND ENVIRONMENTAL ENGINEERING DEPARTMENT (SHB) FEB 2009

Institutionsöversikt: Samhällsbyggnad (SHB) mars 2008 - Windows Internet Explorer

https://webapp.ltu.se/fakturainfo/viewTypFordelning.htm?inst=SHB&fakturaMor

File Edit View Favorites Tools Help

Lexin svensk-... Välkommen till ... Institution... ITS Servicede...

Institutionsöversikt: Samhällsbyggnad (SHB) mars 2008

Ny sökning

INSTITUTION/ AVDELNING	ANVÄNDARKONTO	DATOR	EXTRA LAGRING	LAGRING	TELEFON	TILLFÄLLIG DEBITERING	UTSKRIFT	WEBBPLATS	SUMMA (SEK)
SHB TOTALT	35 910.00	62 856.00	2 960.00	21 824.00	31 078.00	88 461.00	16 212.00	36 278.00	295 579.00
101 Gemensamt shb	3 249.00	8 300.00	2 960.00	1 344.00	4 641.00	21 936.00	1 927.00	11 406.00	55 763.00
108 Grundutbildning SHB					1 133.00	22 050.00			23 183.00
105 Complab	1 368.00	2 630.00		1 008.00	1 417.00		464.00		6 887.00
111 Drift och underhåll	4 446.00	8 359.00		2 336.00	3 878.00		2 045.00	4 870.00	25 934.00
113 Avfallsteknik	2 223.00	3 890.00		1 376.00	1 516.00		1 538.00	2 540.00	13 083.00
116 Arkitektur och infrastruktur	9 405.00	16 996.00		4 608.00	5 226.00	7 350.00	3 663.00		47 248.00
117 Geoteknologi	5 472.00	8 564.00		4 432.00	5 552.00	35 025.00	3 083.00	2 380.00	64 508.00
118 Geoteknologi - swebrec	684.00	315.00		16.00					1 015.00
119 Byggnadskonstruktion	9 063.00	13 802.00		6 704.00	7 715.00	2 100.00	3 492.00	15 082.00	57 958.00

Local intranet 100%