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Activities within different structures

Support services		Sys		
Staff support and services	Student support and services	Staff Systems	Student System	Environment Support
Building	Counselling services	Accounting	Student systems	Assignment services
administration	Student support	systems	Registration	Telecommunication
services	Student bursary	Internal relation	systems	support
Market research	systems	systems	Web systems	Academic services
services	Legal aid clinic	Internal web		Despatch services
University teaching	Enquiry/information	systems		Examination services
services	services	Personnel		Library services
Management		systems		Telecommunication
information services				services
Corporate				Postal services
communication and				
marketing services				
Organisation				
development				
services				
Publication services				
Editorial services				
Financial services				
Bursary services				
Legal aid clinic				
Research visit				
services				
Scheduling				
Typing pool services				
Copying services				

Table A1: Activities within each structure

Lecturing Staff:	Lecturers
	Markers
	Assistant
	Educational technologists
Students	
Administration and	Production staff
Support staff	Despatch staff
	Postal system staff
	Assignments & Examination staff
	Library staff
	Registration staff
	Building administration
	Computer services staff
	Financial staff
	Telecommunication staff
	Information Centrum staff
	Bureau staff
	Student support staff
	Post-graduate student affairs
	Undergrad student affairs
	Matriculation board
	Legal aid clinic
	Bureau for student counselling and career development
Management	Management teams
-	Rector
	Vice-Rector
	Registrar
	Boards
	Council
Other	Researchers
	Programmers
	Task groups and Target groups in production of the Internal report
	Quality Assurance team
	Marketing team (could include lecturing staff & marketing staff)
	Advertising team
	Consultants
	Government

Role players in the Distance Education University (DEU)

Table A2: Examples of role players

Management structures



Figure A1: Example of UNISA Management Overarching Structures (1998)

Higher education institution model (HEI-model)

The higher education institution (HEI) consists of various components (Figure A.2).



Figure A2: HEI components

A number of processes are associated with each component or sub-component. Processes are divided into activities which are divided into various tasks.

Examples for the following are included:

Course Material product

- Paper-based material
- Multimedia material
- Broadcasting material
- Web-based material

Research product

- Publication, thesis and technical report
- Literature review, conference presentation, artefact and prototype

Graduate

- Promotional product
 - o Advertisement and information resource
- Commercial product
 - o Software and hardware, model & report, patent, printed, audio and visual material
- Internal report
- Role Players (an overview)



Figure A3: Paper based course a material











Research product : Literature review, conference presentation artefact and prototype





Product : Promotional product : Advertisement and information pruduct



Product : Commercial product - software and hardware



Product : Commercial product - Model and report



Product : Commercial product - Patent and printed, audio or visual material

Internal report



Data relevant to determination of requirements elicitation characteristics

Reference Number	Reference	Reference Number	Reference
1	(Macaulay, 1996)	2	(Madhavji <i>et al.</i> , 1994)
3	(Goodrich & Olfman, 1990)	4	(Eman & Madhavji, 1995)
5	(Dawson, 1991)	6	(Cordes & Carver, 1989)
7	(Davis, 1993)	8	(Zagorsky, 1990)
9	(Basili & Weiss, 1981)	10	(Farbey, 1990)
11	(Kotonya & Sommerville, 1995)	12	(Nuseibeh & Easterbrook, 2000)
13	(Maiden & Rugg, 1996)	14	(Johnson, 1992)
15	(Schneider & Winters, 1998)	16	(Jarke & Kurki-Suonio, 1998)
17	(Macaulay et al., 1990)	18	(Nuseibeh & Robertson, 1997)
19	(Sommerville & Sawyer, 1997)	20	(Viller & Sommerville, 1999)
21	(Loucopoulos & Kavakli, 1995)	22	(Yu, 1997)
23	(Greenspan & Feblowitz, 1993)	24	(Dardenne, Lamsweerde & Fickas, 1993)
25	(Lamsweerde, 2000)	26	(Young, 2002)

Table B1: Activities in a requirements ELICITATION procedure

Table B2: Characteristics

Phase	Sub-phase	Characteristic	No of Refs	Reference_no (Table 1)
All phases	Automated support	Provide automated support for the RE process	8	1 2 8 10 11 17 19 26
	G. 1 1	Provide standardised ways of describing work		1 0 11 10 07
	Standards	products The presiden of definition of its notation	6	1 2 11 19 26
		Process model standards	2	11 19
	Appropriate	Select appropriate technique for the problem	/	4 0 / 12 19 20 25
	techniques	domain	6	2 12 13 19 26
	•	Use of use cases to describe related tasks	4	15 16 19 26
		Support a systematic step-by-step approach	3	1 19 26
		Solutions can easily be modified and are		
		3	2 17 26	
	Documentation	Support documentation of requirements	4	1 10 19 26
	Maintenance	Provide procedures for maintaining work	1	1
	Conflict	Conflict population	1	1
Foosibility	Goal Description	Define the goal of the modelling	1	3 22 24 25
reasibility	Management	Define the goal of the moderning	4	5 22 24 25
	involvement	Management consent with solution	2	2 11
		Management attitude towards change	2	9 19
	Feasibility	Support feasibility studies	6	1 2 4 11 17 19
	5	Predictions about the system	1	3
		Scope for integration with existing systems	1	11
		Scope for evolution	1	11
	Cost-benefit	Do cost-benefit analysis of options	8	1 4 5 6 7 8 10 17
	Requirements			
Elicitation	Specification	Requirement completeness	5	3 4 18 19 26
		Requirement relevance	4	2 3 18 26
		Expectations during specification of	4	2 4 21 26
		Commentered	4	5 4 21 20
		Communication during specification of	4	0 11 1/ 18
		requirements	3	3 11 26
		Requirement accuracy	2	3 26
		Importance of necessity: requirements		
		document	2	6 26
		Level of control over specifying requirements	1	3
	Constraints /			
	Boundaries	Specify constraints / boundaries	5	2 11 12 19 26
	Problem analysis	Support analysis	1	1 2 11 12 19 25 26
		process	3	2314
	Use data-gathering	process	5	2 3 14
	techniques	Support data-gathering techniques	4	2 12 19 26
	Client involvement	Support customer/client involvement	2	3 26
	Motivation for			1 2 3 7 11 12 17 19
Modelling	modelling	Support modelling	11	20 25 26
	Goal Modelling	Model the purpose by describing behaviour	2	21 26
	User involvement	Reflect the needs of customers / users	5	2 4 11 17 26
	Model environment	Model business rules	3	23 25 26
		Support modelling of workflows	3	2 23 25
		Clarity of business process	2	4 18
		Nodel system services	2	25 25

		Systems architecture modelling	1	19		
		Support articulation / coherence of the produc	t			
Triage		concept	3	1 12 18		
	ID of Measurement	Provide ways of assessing the quality of work				
Verification	tools	products	6	1 2 9 17 18 26		
		Enable identification of measures of the RE				
		process	4	1 2 18 26		
1		Support descriptions of product effectiveness				
		in RE terms	2	14		
	Measures	Quality of the product	1	4		
		Process effectiveness	1	5		
		Cycle time	1	5		
		Trace-ability	1	18		
		User/customer satisfaction	5	2491117		
		Requirements maturity (number of changes				
		made to R document)	3	4 9 10		

Subprocesses derived from the high-level process model

For the sake of clarity, the generic high-level process model derived in Phase 4 of the requirements elicitation procedure in Chapter 5 is repeated (Figure C1).



Figure C1: High-level process model

Data gathered for the subprocesses at the University of South Africa

During Phase 1 to Phase 4 of the requirements elicitation procedure, all the units for the different subprocesses formed part of the data-gathering process. The *Registration* process was used as an example in Phase 5 of the procedure, in Chapter 5. In this Appendix, a summary of the high-level processes is given.

Due to a space constraint, the data models are not included in this document. Some of the documents used in data gathering are included in the remainder of the document.

	Process	Level 1 –	Level 2 – Subprocesses	Level 3 – Subprocesses
		Subprocesses	•	
P ₁	Reflective	P ₁₁ Get research	P ₁₁₁ Search bibliographic databases	
	Research	material	P_{112} Search CD Rom with journal abstracts	
			or completes papers.	
			P_{113} Search citation indexes	
			P ₁₁₄ Search journal collections	
			P ₁₁₅ Search magazines	
			P ₁₁₆ Search Internet	
			P ₁₁₇ Search textbooks	
		P ₁₂ Work though	P ₁₂₁ Identify main search areas	
		material	P_{122} Compile search terminology	
			P_{123} Read through relevant journals	
			P_{124} Identify relevant terminology P_{125}	
			Identify Links	
		P ₁₃ Retain/discard	P_{131} Allocate priority to material (e.g.	
		material	relevant or not)	
			P_{132} Keep material relevant to topic	
	Course	P ₂₁ Reconnaissance	P_{211} Study outcomes from P_1 (Reflective	
P_2	Development		research)	
			P ₂₁₂ Consider current structure (if any) of	P ₂₁₂₁ Identify success factors within current course material.
			course material	P_{2122} Identify problem areas within current course material.
		P ₂₂ Analysis	P ₂₂₁ Needs analysis	P ₂₂₁₁ Determine student needs
				P ₂₂₁₂ Determine 'customer' needs
				P_{2213} Report on newest trends (from P_1)
				P ₂₂₁₄ Consider current institutional strategies, e.g. use of broadcast as
				medium.
			P ₂₂₂ Instructional analysis	P ₂₂₂₁ Consider different instructional methodologies
				P ₂₂₂₂ Consider instructional techniques
				P ₂₂₂₃ Identify instructional goals
				P ₂₂₂₄ Describe instructional limitations (e.g. not all students have access
				to a video machine)
			P ₂₂₃ Product selection	P ₂₂₃₁ Select course objects to be included in course
				P ₂₂₃₂ Select instructional methodologies and techniques
				P ₂₂₃₃ Establish human resource need for the course development

Processes within a NON- Electronic Learning environment

	P ₂₂₄ Technical requirement definition	P ₂₂₄₁ Establish minimum standards, e.g. time constraint (180 minutes available) on video P ₂₂₄₂ Establish tools needed during course development e.g. filming equipment for video
	P Resource analysis	Prov. Do a cost analysis (is the development feasible?)
	r 225 Resource analysis	P_{2251} D0 a cost analysis (is the development reasoner) Prove Establish the availability of human resources
		P ₂₂₅₂ Establish the availability of tools needed for course development
P23 Design ¹	P231 Salact the course object to be	1 2253 Determine the availability of tools needed for course development.
r 25 Design	designed	
	P232 Instructional design for a course object	P2321 Decide on specific course material to be covered by unit. P2322 Identify learning goals for specific course material.
		P2323 Decide on instructional methodologies and techniques for this specific course material.P2324 Draw up a report consisting of all the instructional design issues
		for the selected material.
	P_{233} Physical design of the course object	P_{2331} Select distribution mechanism (e.g. paper-based, video, audio)
	(using the instructional design as input)	P ₂₃₃₂ Draw up a specification document
P ₂₄ Development	P ₂₄₁ Awareness program	P ₂₄₁₁ Review subject methodology
		P_{2412} Identify problem areas
		P ₂₄₁₃ Assist in lacking areas
	P_{242} Develop material	P_{2421} Write material
		P ₂₄₂₂ Develop multi-media material
	P ₂₄₃ Evaluate	P ₂₄₃₁ Proof-read and evaluate material
P ₂₅ Testing	P ₂₅₁ Organize course objects into a unit	
	P ₂₅₂ Test and evaluate material against	
	initial instructional goals	
	P ₂₅₃ Implement changes	

¹ During design different development teams may design more than one course object. The process description made applies to all design activities.

P ₃	Registration	See Chapter 5, Phase 5.						
P ₄	Production	P ₄₁ Quality control (Scheduling unit)	P ₄₁₁ Scheduling unit receives tutorial matter	P_{4111} Sign acceptance for tutorial matter (received) P_{4112} Give tutorial letter to responsible person (according to type, e.g. first tutorial matter, study guide, etc.)				
	P ₄₁₂ Go through check list		P ₄₁₂ Go through check list	P_{4121} Read through text for errors, e.g. contact numbers for units P_{4122} Check margins of tutorial letter according to selected format (A4/A5) P_{4123} Check correct tutorial number				
		P ₄₂ Prepare for printing (production unit)	P ₄₁₃ Register material data on system	P ₄₁₃₁ Register material on own system. P ₄₁₃₂ Register material on Production system P ₄₁₃₃ Register material on Electro Shed system				
			P_{414} If not satisfactory, send back to authors					
			P ₄₁₅ If satisfactory send to production unit					
			P ₄₂₁ Receive material and capture document related data	P_{4211} Allocate job number P_{4212} Capture job related information, e.g. pages, cover, financial responsibility P_{4213} Put PDF on SOL P_{4211} Select print process, e.g. printer vs press				
			P ₄₂₂ For print process, schedule print process according to importance	P_{4221} Put file in scheduling queue. P_{4222} When material is first in queue, the print process starts.				
			P_{423} For press process, send material to press unit.	P_{4231} Prepare material for press process. P_{4232} Print material (processed) on photographic plates. P_{4233} Schedule material for printing.				
		P ₄₃ Print	P ₄₃₁ Print material	P_{4311} Material is printed, bound and after quality control, sent to distribution unit.				

P ₅	Distribution(P	P ₅₁ Immediate	P ₅₁₁ Packaging	P ₅₁₁₁ Request label list from Computer Services			
	HD, 2003)	distribution		P ₅₁₁₂ Select size packaging, e.g. Small envelope, A4 Envelope			
				P_{5113} Schedule job in queue for packaging & labelling			
				P ₅₁₁₄ Pack and label material			
			P ₅₁₂ Postage	P ₅₁₂₁ Weigh material			
				P_{5122} Assign amount to material			
				P ₅₁₂₃ Send to Post Office			
		P ₅₂ Storage	P ₅₂₁ Put material in storage	P ₅₂₁₁ Receive bulk material (for next year) or remainder of despatch			
		management		material			
			P_{5212} Scan bar code				
			P ₅₂₁₃ Put material in marked area in storage room.				
			P ₅₂₂ Retrieve material from storage P ₅₂₂₁ Receive request from student (workflow) or registration				
			department				
			P ₅₂₂₂ Download material to hand-held scanner.				
			P ₅₂₂₃ Go to marked area in storage room				
				P ₅₂₂₄ Scan item requested			
				P ₅₂₂₅ Repeat until all the requested material on hand-held device is			
				issued.			
				P ₅₂₂₆ Send to packaging unit or directly to issuing officer at desk			
P ₆	Student	The Student System	stems processes forms part of existing computer processes and is actually a support facility for the other high-level				
	Systems	processes. These ar	are already automated systems and therefore are not included in the focus of this study. There is a possibility of looking				
		for further research	research into the combination of legacy systems after implementation of e-learning.				

Registration resource diagrams for postal and personal

Registration Process: Personal ⁽³⁾



Figure C2: Personal registration process

Registration Process: Mail ⁽³⁾



Problems

- Constant changes to Calender makes registration difficult
- Too many requirements to register and changes constantly
 Students get wrong information from staff

Needs:

Study information database

Figure C3: Mail registration process

Processes within Course development

Process	UNISA(Heydenrych, Accessed 2003)	OUN(Booyse, 1995)	Moore(Kea rsley, 1996)	Dick, W & L Carey(Dick & Carey, 1990)	G Goddard(Goddard, Accessed May 2003)	Priya Williams(Williams, Accessed 5 May 2003)
Reconnaissance	Need /request Select devel & prod range Analysis					
Preliminary research		Research and planning		ID of instructional goals		
Planning / Analysis	Instructional analysis Planning			Instructional analysis Performance objectives Criteria Strategies		Needs Analysis Tasks /user needs Technical Resource
Design				Design of evaluation	Learn goals Instructional Object Audience analysis	Instructional design Interface design
Elaboration phase		Write materials, Audio visual production Tutorial plan Examination Development testing				
Development	Staff induction Development Implementation				Create outline Review existing materials Develop and organize mater	Media creation
Production		Physical production				
Delivery					Maintain student records Update and changes to course	
Evaluation					Assess student learning Develop evaluation Track student feedback Review learning goals Review approach	Online testing and evaluation
Enrichment	Professional develop. of cluster staff					
Implementation		Get course running				
Exploitation		Teaching - learning phase				

Processes within Course development

Process	UNISA	OUN	Moore	Dick, W & L Carey	G Goddard	Priya Williams
Reconnaissance Preliminary	Need /request Select online learning	Research and planning		ID of Instructional goals Instructional analysis		Needs Analysis Tasks /user needs
research	development			Performance objectives		Technical
Planning /	Analysis			Criteria		Resource
Analysis	Select product range			Strategies		
	Instructional analysis					
Design	Planning & Research			Design of evaluation	Learn goals	Instructional design
					Instructional Object	Interface design
					Audience analysis	
Development /	Staff induction	Write materials, Audio			Create outline	Media creation
Elaboration	Development,	visual production			Review existing materials	
	delivery, evaluation	Tutorial plan			Develop and organize matter	
	and revision	Examination				
		Development testing				
Production/	Implementation	Physical production				
Implementation						
Evaluation/		Teaching - learning			Assess student learning	Online testing and
Exploitation		phase			Develop evaluation	evaluation
					Track student feedback	
					Review learning goals	
					Review approach	
Enrichment	Informing BLD and					
	lecturers					

Resources for Course Development

Course Development	- Enquiries			
Name	Japie Heydenrych			
Telephone	6384			
Institution	UNISA			
Date	6/5/2003			
Comments	Het die prosesse al deurgetrap en op die UNISA Webbladsye http://cole.unisa.ac.za/old gepubliseer asook in sy PhD wat nog nie			
	beskikbaar op die winkelrakke is nie. Dit kom basies neer op 4			
	prosesse:			
	Dianning			
	Plaining Development & Implementation			
	Enviolment & Implementation			
Culture concern	Enrichment			
Subprocesses:	Paraliza.			
Course Development	- Enquiries			
Name	Van Aswegen – Open University of the Netherlands			
Telephone	6384			
Institution	UNISA			
Date	6/5/2003			
Comments	Van Aswegen et.al. het met 'n besoek aan UNISA in 1995 hul			
	metodologie bekend gestel as:			
	Preliminary research and the planning phase (content and didactic			
	design of the course, costing, course plan, approval;			
	Elaboration phase (plan given concrete form);			
	Writing materials (instructions received from course team – authors start writing):			
	Audio-visual production (according to course plan):			
	CAL productions (according to course plan):			
	Multi-media productions (integrated use of audio-visual and computer programs);			
	Tutoring plan (study guidance plan - all contact with students recorded into the tutorial plan, and training activity/introduction included with the plan):			
	Examination (examination to be available as soon as course is available);			
	Developmental testing (interested students selected and study the draft version of the course for comments and adjustments):			
	Production phase (physical production of course components); Implementation phase (last measures to get course running – briefing and training of tutors);			
	Exploitation phase (teaching-learning phase – data collected in order to revise or discontinue course).			

Course Development - Enquiries		
Name	Booyse et.al.	
Telephone	6384	
Institution	UNISA	
Date	6/5/2003	
Comments	In 1995 is 'n prosesmodel voorgestel in 'n werksessie met OUN,	

opgeneem in 'n verslag Into the future: Report in a visit to the Open University. Hiervolgens stel hul voor dat daar by UNISA die volgende prosesse is vir kursusontwikkeling:
Preliminary research and the planning phase (content and didactic
design of the course, costing, course plan, approval);
Elaboration phase (plan given concrete form);
Production phase (physical production of course components);
Implementation phase (last measures to get course running, and
briefing and training of tutors);
Exploitation phase (teaching-learning phase and collection of data in
order to revise or discontinue course).
Uit hierdie inligting Is JAPIE se model saamgestel.

Course Development	
Name	Moore, MG
Title	Distance education: a systems view
Institution	UNISA library
Date	6/5/2003
Comments	Moore and Kearsley (1996: 103) suggest a systematic, continuous and cyclical process of analysis, design, development, implementation and evaluation.

Course Development				
Name	Dick, W & L Carey			
Title	The systematic design of instruction <i>in Introduction to instructional</i>			
	design			
Institution	UNISA library			
Date	6/5/2003			
Comments	Dick and Carey (1990: 2) provide a more extensive process – the			
	identification of instructional goals, instructional analysis, writing			
	performance objectives, and development of criterion-references test			
	items, development of instructional strategy, development and			
	selection of instructional materials, designing of formative evaluation			
	and designing of summative evaluation. This process does not provide			
	adequate direction regarding the complete production process.			

Course Development					
Name	Gretchen Goddard				
Title	Online course development				
Institution	http://acadweb.snhu.edu/DE/Goddard_Gretchen/M3CDC702.htm				
Date	6/5/2003				
Comments	The online course development cycle proposed of the Souther New Hampshire University, uses process including: Design Development Delivery Evaluation and Redesign.				

In the design , the author includes:
Define Learning Goals
Create Instructional Objectives
Conduce Audience Analysis
In the development , the author includes:
Create and Organize Content Outline
Review and 'Retool' Existing Materials and Curricular Strategies
Develop, Organize, and Sequence Curricular Strategies
In the delivery , the author includes:
Maintain student records and track student progress
Make necessary updates and changes to course on on-going basis
In the Evaluation and redesign , the author includes:
Assess Student Learning
Develop/Deliver Evaluation (of course)
Seek and Track Student Feedback
Review and Revise Learning Goals with Outcomes
Review and Revise Curricular Approach

Description of Key Performance Areas of academic work:

Level 2: Senior Lecturers (SL) & Associate Professors (AP)

ACTIVITY AREA ONE: TEACHING AND LEARNING

Teaching and Learning involves all tuition-related practices in which academic staff are involved, with an emphasis on meeting the needs of the student body through the provision of appropriate and relevant courses, appropriate modes of delivery and equitable assessment practices and student support.

1 Course involvement:

- Full involvement in course/s in specialist field including course design at all levels

- Develops curricula for courses in which involved

- Develops materials for courses, in collaboration with team members, including the writing of tutorial letters and study guides

- Sets examination and assessment questions at appropriate levels

- Assesses exams and assignments and oversees assessment undertaken by other lecturers

- Adheres to quality standards and defines quality at course level, in line with departmental, faculty and university norms

- Experiments with an increasing range of teaching technologies

- Identifies shortcomings or lacunae in existing study packages and positively contributes towards rectification

- Conducts lectures, seminars, workshops for undergraduate and postgraduate students

- Deals with student exemptions and decides on borderline cases if acting as course coordinator

2 SUPERVISION OF GRADUATE STUDENTS:

- Supervises honours and masters students

- Supervises or co-supervises doctoral students in exceptional cases

3 ACADEMIC LEADERSHIP:

- Provides leadership at the level of team or paper by supervising team cooperation and work allocation

- Coordinates/supervises teaching assistants, tutors and external markers

- Schedules own and team work programme

4 STUDENT SUPPORT:

- Provides general guidance and consultation through dealing with student queries (phone, interview, letter e-mail)

- Plans discussion class programmes and schedules group visit programmes

- Maintains learner support practices, including print-based, contact, technologically enhanced and environmental support strategies

- Identifies and anticipates student problems and constructs responses and remedies for these

5 MAINTAINS COURSE RELEVANCE AND APPROPRIATENESS

- Keeps up to date with general national and international trends in subject area

- Incorporates current trends in subject field and didactic methodology into lecture content and materials development

- Actively engages in debate about emerging trends and needs

- Updates processes and practices in the department in line with national and international trends

6 MANAGEMENT AND ADMINISTRATION

- Plans and manages the work of teams

- Takes decisions on group processes -- planning, outputs and resource usage

- Liaises with Administrative and professional departments on processes such as submission of tutorial material etc.

- Familiarises self with administrative regulations, requirements, procedures and processes governing academic work flow

- Organizes meetings / workshops / seminars/ discussion classes

ACTIVITY AREA TWO: RESEARCH

Research involves all activities linked to the acquisition or development of knowledge and skills in a subject field, or with regard to ODL methodology and approach.

1 QUALIFICATIONS:

- Undertakes discipline based or reflective research

- Upgrades academic or professional qualifications

2 RESEARCH OUTPUT:

- Produces research linked to upgrading of qualifications - and average of one output (e.g. articles, workshops, conference papers) per year on completion of qualification

3 REFLECTIVE RESEARCH:

- Conducts evaluations of lectures and course material and improves practice based on feedback
- Initiates and participates in reflective research projects
- Designs tuition guidelines and ensures application thereof in teams

4 EVALUATION / REVIEW OF ACADEMIC

Reviews and mentors peer course outputs

- Functions as a critical reader by reading and reviewing research articles, usually as part of a review panel

- Functions as a second and an external examiner

5 MANAGEMENT AND ADMINISTRATION

- Manages individual involvement in research processes -- prioritizes work and meets deadlines

- Oversees and participates in project teams working on research projects

- Becomes actively involved in developing programmes for conferences, workshops and seminars and coordinating tasks

Unit	Computer Services	DATE : 2/9/2003
Goal	Student Systems	VN Stipinovich
	Anneke 3013	

Different systems identified

Student	Finansies
	Alumni
	Tutors
Coolgen Encyclopaedia	Taal om studentestelsel te ontwikkel
BMI: Business objects	Data-ontrekking
Activity based costing	
Academic Management	Dosente tydstate, totale (statistiek vir BMI)
Telephone management	
Prescribed books	
Buildings Administration	Take bv. Lig
Conference	Bespreek vir conference
Matric results	Sertifisering
Postal room	Geregistreerde pos, geld
Matriculation	Kry v matrikulasie board – spesiale vrystelling
	Engeland
Community participation	
Treasury administration	Geld wat hulle belê (bates)
Electronic text	Biblioteek
Postilion	Koppelvlak met Absa
Sales	Verkope v UNISA press
BMI: Dataware house	
Financials	
Music Examination	
Micro Management	Rekenaars PC equipment take uitgemaak
Flexitime	
Human Resources	
Scheduler	Produksie,
	Aand batch jobs
UNISA Press	Eie boeke
Post graduate dissertations	
Social Science	Own practical
Equity companies	
SRC	Voting
Training	Watter training het wie gedoen
Equity employment	Human resources
TUWS requests	Learning TUWS Rekenaaruitbreiding
African Languages	
Internet Access	SOL,

Data gathered for the subprocesses at the University of Pretoria

Some interviews were conducted during the different phases at the University of Pretoria. This included interviews in key departments and service departments. In this section a summary is given of some of the significant interviews conducted at the University.

Unit	Academic	Date:	September 2002
Goal	To discuss the activities within an academic department		
Interview with	Dr. Tommie Meyer		
Known generic process	Course Development		
Information gathered from interview:			
Compared to the local state of the second state of the			

• Course preparation done by lecturer before course presentation.

• Responsibility for course layout within Department.

• No formal cycle for Course Development

• Lecturers responsible for compilation of course material, production and distribution.

•Lecturers responsible for examination.

• Lecturers involved in numerous Departmental activities that form part of support processes such as departmental coordination, administration and management

departmental coordination, administration and management.

Unit	Bureau for	Date:	September 2002
	Institutional Research		
	and Planning		
Goal	To discuss the activities within the Unit		
Interview with	Unit representative		
Known generic process			

Information gathered from interview:

• The department is involved in SANSA activities during which the data is gathered for research purposes to distribute to government for subsidy purposes.

• Management information such as staff responsibilities and outputs are included in Management reports.

Unit	Client Service Centre	Date:	September 2002	
Goal	To discuss the activities within the Unit			
Interview with	Unit representative			
Known generic process	Student support?			
Information gathered from inte	erview:			
• Answer all written and phone	e queries on different aspe	cts of the Univer	rsity.	
• Answer queries by prospective	ve students.			
Provide all non-academic service	vices to students including	bursaries, mark	s, loans, parking, accommodation etc.	
Unit	Department of Process	Date:	September 2002	
	Integration			
Goal	To discuss the activities within the Unit			
Interview with	Unit representative			
Known generic process	Registration			
Information gathered from interview:				
• Student financing				
• Student administration				
Registration				

• Rules and Regulations (Year books)

Unit	Department of	Date:	September 2002
	Academic		
	Administration		
Goal	To discuss the activities within the Unit		
Interview with	Unit representative		
Known generic process			
• Sub-unit within Department of Process Integration			

Unit	Department of	Date:	September 2002	
	Information		-	
	Technology			
Goal	To discuss the activities	within the Unit		
Interview with	Mr. Gerhard du Plessis			
Known generic process	Student support			
Information gathered from inte	erview:			
• Similar to UNISA Computer Services				
•User support				
• Infrastructure				
• Systems and operating				
•Lab				
• Printing services.				

Unit	Department of	Date:	September 2002
	Marketing Services		
Goal	To discuss the activities	within the Unit	
Interview with	Unit representative		
Known generic process	-		
Information gathered from interview:			
• Cultural events			
• Marketing research			
• Marketing & communication			

Unit	Human Resource	Date:	September 2002
Goal	To discuss the activities	within the Unit	
Interview with	Mr. Louw Botha		
Known generic process			
Information gathered from inte	erview:		
• Staff centre			
•Organization structuring			
• Development			
o SAQA	o SAQA		
 Skills develo 	 Skills development 		
 Staff develop 	oment		
• Evaluation of human resources			
• Staff administration			
• Staff benefits			
Staff budget			

 Staff budget

Unit	Facilities and Services Date: September 2002			
Goal	To discuss the activities	within the Unit		
Interview with	Mr. Wessel Oosthuizen			
Known generic process				
Information gathered from inte	erview:			
 Facility Management 				
• Onderstepoort				
• Properties and Facilities				
• Technical, Building and Ground services				
• Operational services				
Accommodation and Food Services				
Hamanskraal Campus				
• Witbank Campus				

Unit	Research Support and	Date:	September 2002
C - 1	The line of the set of the	111	
Goal	To discuss the activities	within the Unit	
Interview with	Unit representative		
Known generic process			
Information gathered from inte	rview:		
• Bursaries			
• Research funds			
Research information			
Research report			
• Subsidy for education.			

Unit	Telematic Learning	Date:	September 2002	
	and Education			
	Innovation			
Goal	To discuss the activities	within the Unit		
Interview with	Unit representative			
Known generic process	Course Development			
Information gathered from interview:				
• Course development using WebCT				
•Extensive programs successfully implemented on web				
• Development of course programs using video technology				
• Educational consultants – support towards educational staff				
• Involved in action research				

Data gathered during identification of subprocesses

During the electronic registration of a new student at UP, a student first completes an application in which only the e-mail address and a password are requested. The student receives an automatic reply (e-mail) and is requested to activate the application by clicking on a link (Figure C4).



Figure C4: Example of an automatic reply received by student

After activation of the application by clicking on the link, the student is routed to a login screen where he fills in his e-mail and password information. He/she may now fill in the application information requested by UP. The database is updated in real time, which enables the student to return to the application if he chooses to stop the application process. After completion of the application form, the student will receive a letter from the University containing his student

number. He will also be requested to submit important supporting material, including a proof of payment of the application fee, identification documentation and certification documentation (Figure C5). The University confirms receipt of the supporting material and sends the application to the appropriate faculty for approval. A student is either rejected or accepted. On acceptance the student receives an acceptance letter and may now register his different modules for the year. He is also notified of minimum payment.

Studentenr.: Navrae: Tel: E-pos: 25447476 Kliëntedienssentrum +27 12 420 3111 csc@up.ac.za



2005-01-20

MEV A DUMMY TREE 123 PRETORIA 0001

Geagte mev Dummy

AANSOEK OM TOELATING : VIR 2005

Dankie dat jy by die Universiteit van Pretoria aansoek doen om toelating.

Let asseblief daarop dat ons nie die aansoek kan evalueer sonder die nodige ondersteunende dokumentaste nie. Bring asseblief jou verwysingsnommer duidelik aan op elke bladsy van die dokumente wat na ons deurgefaks word. Moet asseblief nie bel of duplikaatfakse stuur nie. Ons sal met jou in verbinding tree indien enigiets ontbreek. Probeer asseblief om alle dokumentasie tegelykertyd te faks en gebruik slegs hierdie faksnommer. +27 (0)12 420 4114.

Ons benodig die volgende dokumente van jou:

- 'n Bankdepositostrokie indien jy die aansoekfooi by 'n bank gedeponeer het.
- 'n Gesertifiseerde kopie van jou Suid-Afrikaanse identiteitsdokument of jou paspoort indien jy nie 'n Suid-Afrikaanse burger is nie.
- Indien jy vir voorgraadse of eerstejaarstudie aansoek doen, word 'n gesertifiseerde kopie van jou
 graad-11 skoolrapport (vir Suid-Afrikaners) of finale skoolsertifikaat indien jy jou skoolloopbaan
 voltooi het, vereis. Let wel: Persentasles word vereis; nie slegs simbole nie. Indien jy 'n
 internasionale student is, word jou laaste skoolpunte of finale skoolverlatersertifikaat vereis, waarop
 vermeld word dat jy universiteitstoelatingstatus verwerf het.
- Indien jy vir nagraadse studie aansoek doen, benodig ons nie 'n kopie van jou skoolkwalifikasies nie. 'n Gesertifiseerde kopie van beide jou graad-/diplomasertifikaat en 'n volledige transkripsie van die punte wat in al die vakke/modules op alle vlakke ten opsigte van elke kwalifikasie behaal

Figure C5 : Example of a student number confirmation and request of supporting material

After the final approval of the application, the student receives an acceptance letter of the University, which enables him to complete the final registration.

In January 2005 I conducted a confirmation interview of my idea of the processes with Mrs. Esterhuizen at UP. We also had some e-mail communication in which I confirmed my understanding and modelling of the processes (examples of communication in Figure C6 and Figure C7).

 From:
 Erna <erna.esterhuizen@up.ac.za>

 To:
 A J ∨an der Merwe

 Date:
 Thursday - January 27, 2005 9:28 AM

 Subject:
 Re: Aansoekvorm

 Wime.822 (6112 bytes)
 Miewi [Save As]

Hi Alta

Ek sal na elke sin die meer spesifieke proses beskryf hieronder:

A J Van der Merwe wrote:

> Hi >

>

> Skuus dat ek weer pla.

> Sal die volgende 'n akkurate beskrywing wees van jou proses? Dit is nou elektronies vir 'n nuwe student.

> P3311 Application form completion

Application form completion on Internet by prospective student

> > P3312 Send message to applicant for confirmation of application

Autoreply confirmation from University to student.

> > P3313 Confirm application payment

Electronic credit card payment application fee online. Confirmation on screen.

FigureC6: E-mail communication confirming the sub-processes

🕙 GroupW	ise WebAccess Message Item - Microsoft Internet Explorer	
File Edit	View Favorites Tools Help	🔁 🧸
Mail Me	ssage No	vell.
Close	Previous Next Forward Reply to Sender Reply All Move Delete Read Later Properti	es
From: To: Date: Subject:	Erna <erna.esterhuizen@up.ac.za> A J Van der Merwe Thursday - January 27, 2005 10:04 AM Re: Aansoekvorm Mime.822 (6387 bytes) <u>Miewi ISave Asi</u></erna.esterhuizen@up.ac.za>	
HiAlta - a	antw na vrae hieronder	
AJVano	ler Merwe wrote:	
> Hi > > Mmmm soos 'n be >	dit is interessant, so 'n onderbreekte student word gesien as 'n "nuwe student" tot hy opgetel is. Word hy daarn estaande student behandel?	a
Definitief. studente niks nuut te dien be	Hulle gaan net voort waar hulle opgehou het met wat hulle ookal beoog. Hulle word gou gekeur want ons beskou or op rekord as bevoeg om voort te gaan met hulle studies. Hulle rekords is ook m.a.w. reeds op die stelsel en hulle h s in ehalwe as hulle kwalifikasies by ander instansies verwerf het nie.	ıs oef
> > Watek Januarie (eintlik wil weet van die bestaande student, is ek reg as ek aanneem as die student op koers is dan kom hy net ten en registreer vir sekere vakke volgens sy rigting?	ug in

Figure C7: E-mail communication on student involved in re-registration after a break from studies

Data gathered for the subprocesses at the Technikon Pretoria

In the first negotiations with Prof. Peter van Eldik at Technikon Pretoria, we discussed the structure of the Technikon and contrasted it with the University structures (Figure C8).



Figure C8: Organogram drew by Prof. Peter van Eldik to illustrate Pretoria Technikon Structure

Different discussions were conducted during Phases 1-4 to identify the responsibilities in the different units. In the remainder of this section, some of the significant interview summaries are given.

Unit	Exam administration	Date:	November 2002
Goal	To discuss the activities within the Unit		
Interview with	Helene Naude		
Known generic process	Assessment		

Information gathered from interview:

• Lecturers are responsible for the capture of marks with regard to examination admission.

•Lectures set and edit the exam papers.

• A typing pool is available for the typing of papers.

• The exam administration unit is responsible for the print of the paper, setting the exam time table and the distribution of the papers.

• Papers are written and distributed by the exam administration to the lecturers for marking and capture of marks.

Unit	Student Services	Date:	November 2002
Goal	To discuss the activities within the Unit		
Interview with	Bettie Vermeulen		
Known generic process	Student systems?		

Important information gathered includes:

• The student service department is responsible for all actions after the successful completion of a student.

• They distribute exam papers to lecturers, capture marks, assist in academic advice, etc.

Unit	Bureau for academic	Date:	November 2002
	support		
Goal	To discuss the activities	within the Unit	
Interview with	Cindy O'Reilly		
Known generic process	Student academic suppor	rt	

According to the Technikon web site the role of student services is to

(http://www.tut.ac.za/tut_web/index.php?struc=115):

- establish relevant academic support programmes to address access, retention and graduation
- expand existing academic support programmes for optimal capacity and impact
- be innovative in the design and multi-mode presentation of services
- provide an efficient support service with guidance and counselling to students.

This includes support to students with regard to a number of activities, including social support, personal counselling, academic tutoring and mentoring, reading enhancements, research, student employment and study methods.

Unit	Telematic education	Date:	November 2002
Goal	To discuss the activities within the Unit		
Interview with	Hermien Johannes		
Known generic process	Course Development		
Important information gathered includes (http://www.tut.ac.za/tut_web/index.php?struc=471):			

Responsible for the development of and support in the presentation of electronic course activities.

• Responsible for staff support in the use of WebCT as course and development tool.

• Arrange electronic activities to support e-learning including video conferencing and computer based testing.

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