

Business Process Re-engineering (BPR) in Addis Ababa University

ICT Services

Situation Analysis (AS-IS) Report

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1. Introduction

Addis Ababa University is currently undergoing business process reengineering of its core and support processes. One of the sub processes identified for BPR is the ICT services process. A team of five staff of the University has been working on the AS-IS phase of this study and reports its findings in this document.

The team, in consultation with the BPR Czar, developed its own terms of reference and agreed to conduct BPR on University ICT services as well as to review the ICT needs and expectations of other teams.

This report provides the results of the analysis of the situation (as-is) on various aspects, including the pain and problems faced, change inducing factors (inputs) and maps of the general procedures followed for resource mobilization in the University.

2. Scope and Limitations

The scope of the ICT Services BPR includes different types of services such as network services, user support services, application development services, and hardware/software acquisition services.

3. Objectives

3.1. General Objectives

The overall aim of ICT Services BPR Team is to appreciate the pain that the university as a whole and its units and the staff feel because of the limited services available and demonstrate the application of current technologies in core and support processes of the university.

3.2. Specific Objectives

- a. Review the strategic plan and fully understand the vision, mission, objectives, goals and core values of the strategy that are directly relevant to ICT Services.
- b. Define customers, stakeholders, collaborators of the process.
- c. Define the end to end process and map the end-to end- process and sub-processes.

- d. Define the input, output and outcomes of the process.
- e. Assess the pains that are felt because of the process, taking AAU strategy as the Promised Land, and show how the current process is an impediment to the success of the strategy.
- f. Define the reasons for the major problems, obstacles and weakness interms of policy, assumptions, procedures, and institutional arrangements.
- g. Establish the current performance baseline of the process.

4. Methodology

In studying the as-is component of the study, the team interviewed selected responsible persons and discussed with staff of different faculties (e.g. science, medicine, technology, social sciences) in order to feel the pain of the foremost customers and identify bottlenecks. The team has also consulted relevant documents that show the initiatives taken to get the ICT services, the results obtained, problems faced and procedural steps involved under each functional area. This was done with the aim of getting insights to map the current processes. As-Is reports of other BPR teams were also examined to check if there are any aspects of the problem that are not addressed.

5. Inputs, Outputs and Outcome of the ICT Process

5.1. *Inputs*

The input to a general ICT process from service point of view is customer need either expressed or perceived by the ICT Office. The triggering factors for the ICT services process include:

- Request from customers for fast, uninterrupted, and secured network services to support the teaching/learning, research and administrative activities of the University
- The changing nature of education where ICT has a substantial role to support the teaching/learning process
- The need for automation among various units of the university

- The need for better communication systems and support for managerial decision making

5.2. *Outputs*

- Develop robust ICT infrastructure in all campuses of the university
- Integration of the use of ICT in the teaching/learning and research activities
- Automate all major units of the university
- Provide adequate support and maintenance
- Build the necessary expertise to support and sustain provision of ICT services
- Enhance economic optimization of ICT services
- Provide next generation facilities for research, study and work

5.3. *Outcome*

The outcome of the ICT services process is directly linked to the outcome of the core process of the AAU in that it results in improved increased access to and quality of education, secured, automated and efficient administration processes, enhanced management decision making based on better reporting and interactive decision support systems.

6. **Customers of the Process and their Needs**

- a) **Customers:** Customers are defined as individuals or units who need ICT services for their operation within the AAU. Based on the ICT needs to be served by the ICT Development Office, one can identify four different customers:
- *Students:* Undergraduate and postgraduate students of the AAU;
 - *Academic Staff:* Teaching and research staff that may be have permanent position or with contract employment;

- **Support Staff:** Administration staffs ranging from the top administrator to messenger whose day-to-day activities are closely related to the core business (teaching and research) of the university.

- **Units:** the academic and administrative units

b) Stakeholders

- **The Government:** The major stakeholder for the AAU is the Government in that the major source of funding is the Government and the sponsor to most postgraduate students is the Government.
- **Strategic Partners:** There are many local and foreign agencies they provide direct and indirect support and their need is quite different from that of the other types of customers.
- **The Public at Large:** As a public institution, the AAU considers the general public as a stakeholder and every step should be taken to satisfy public interest.

c) Collaborators

- **Higher Learning Institutions:** As the longest serving university in the country, other young higher learning institutions expect a lot in terms of experience sharing and resource base.
- **Research Institutions:** These institutions are different from other higher learning institutions in that their core business is research activity with minimal teaching and/or training component.

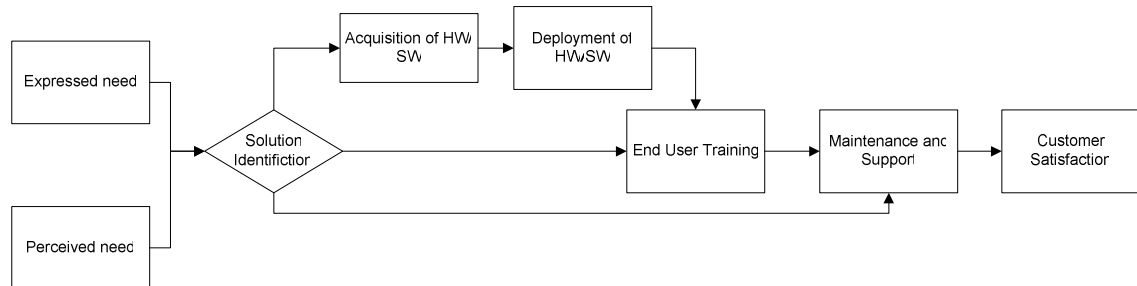
Customer Needs

		<i>Services</i>		
	<i>Customer</i>	<i>Academic Services</i>	<i>Administrative Services</i>	<i>Network Services</i>
1	Students	<i>Application for Admission, Registration, Record Access, E-Learning System, Library System, Computing System</i>	<i>Accommodation, Health</i>	<i>Internet, E-Mail, File and Print, Web, Antivirus</i>
2	Academic Staff	<i>Class Roster Access, Grade Submission, E-Teaching System, Library System, Computing System,</i>	<i>Application for Leave, Promotion, Scholarship,</i>	<i>Internet, E-Mail, File and Print Sharing, Web, Port, Antivirus</i>
3	Support Staff	<i>Record System, Library System</i>	<i>Finance System, Personnel System, Property Management System,</i>	<i>Internet, E-Mail, File and Print Sharing, Web, Antivirus</i>
4	Academic Units	<i>Class Roster Access, E-Teaching System, Library System, Computing System,</i>	-	<i>Internet, E-Mail, File and Print Sharing, Web, Access Control,</i>
5	Admin Units (Central & Others)	-	<i>Decision Support Systems, Finance System, Personnel System, Property Management System,</i>	<i>Internet, E-Mail, File and Print Sharing, Web, Access Control,</i>

7. Process Definitions and Mapping

7.1 High-Level End-to-End ICT Process

ICT service covers a range of activities from simple orientation by way of information to installation of complex hardware and software system that involves procurement.

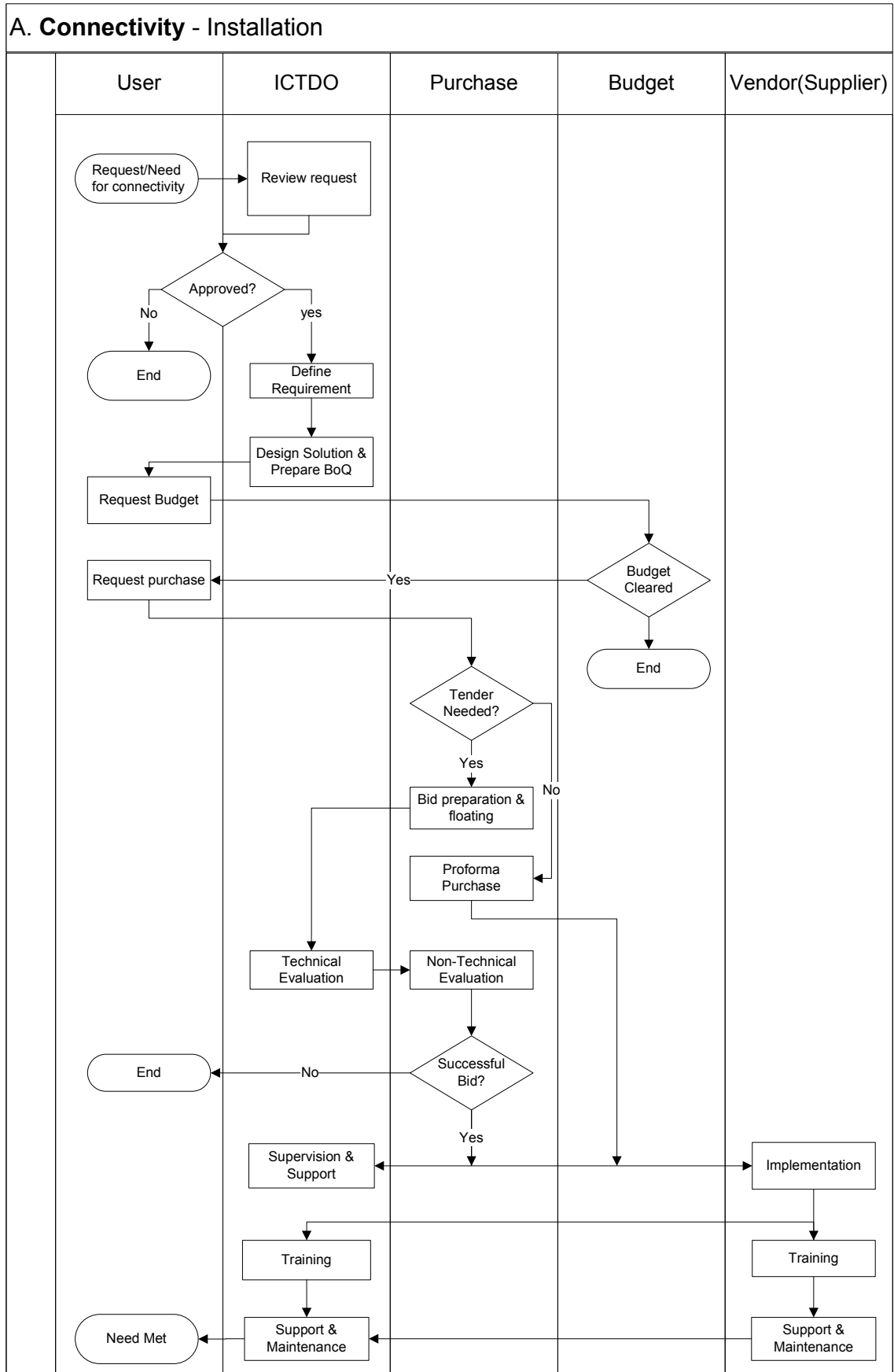


The following are core sub processes for the ICT services process.

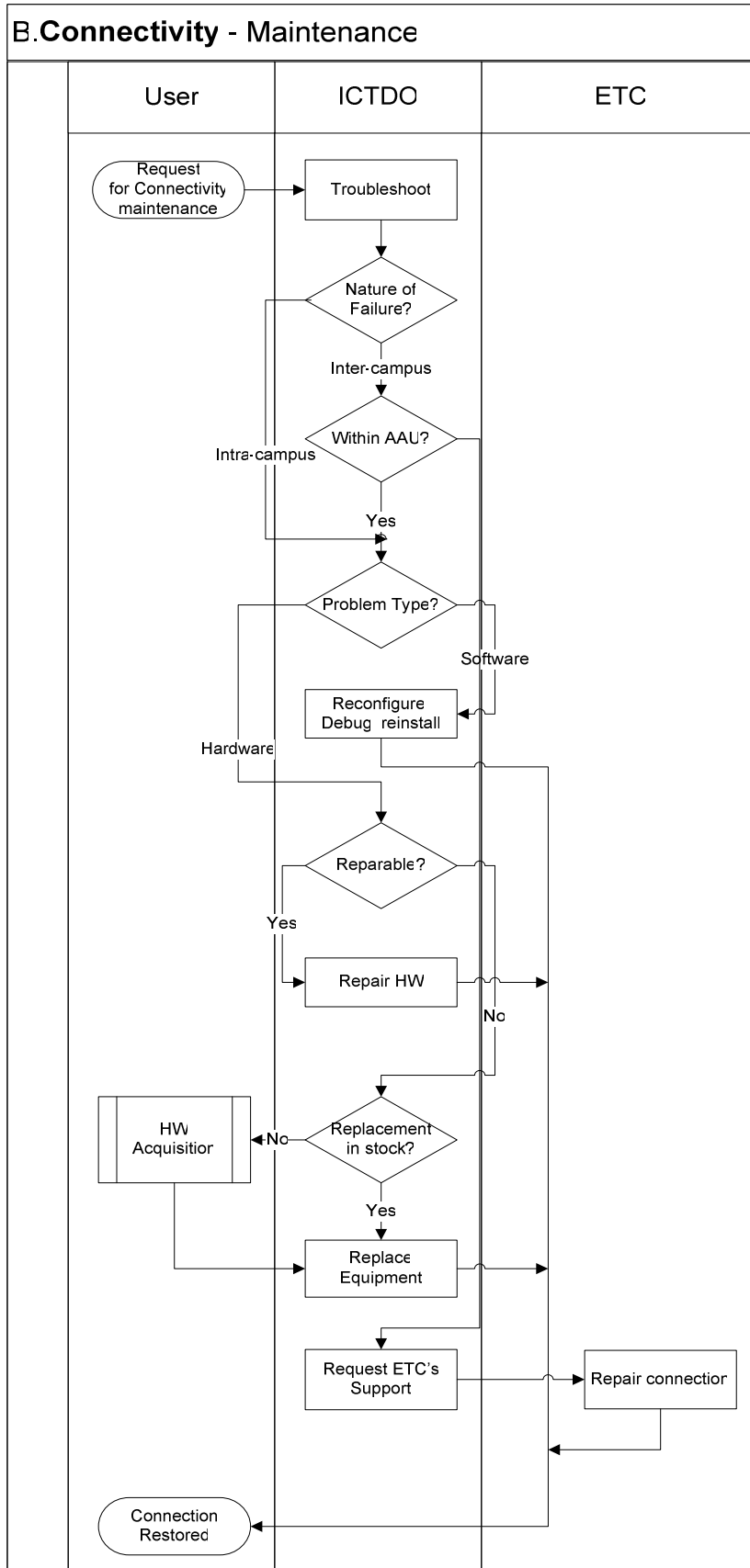
- Connectivity
- Access to Network Services
- Hardware Acquisition
- Hardware Maintenance
- Application Services
- Web Development and Hosting
- Training and Support
- Consultancy

7.2 Detailed Process Mapping

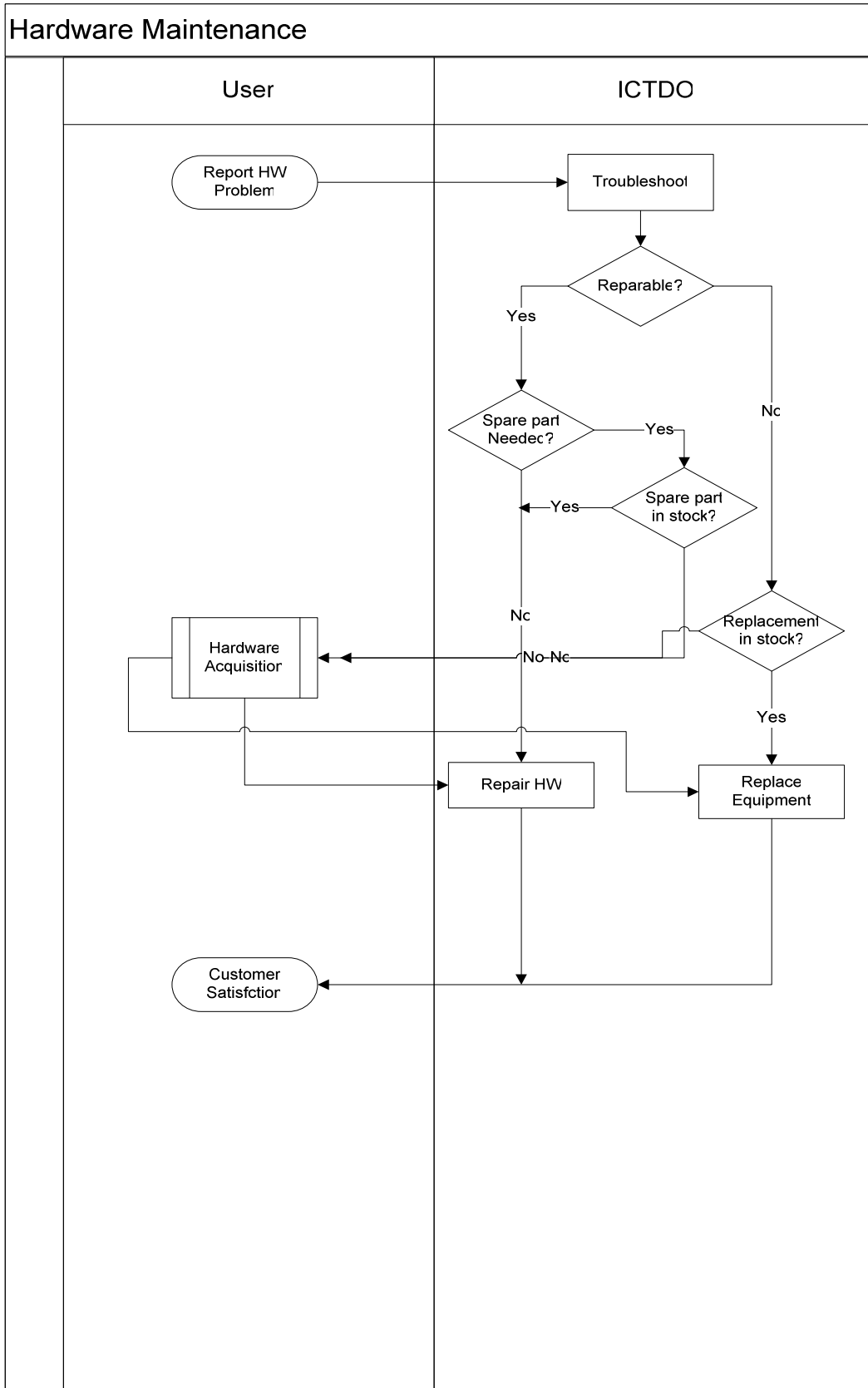
7.2.1 Connectivity – Installation



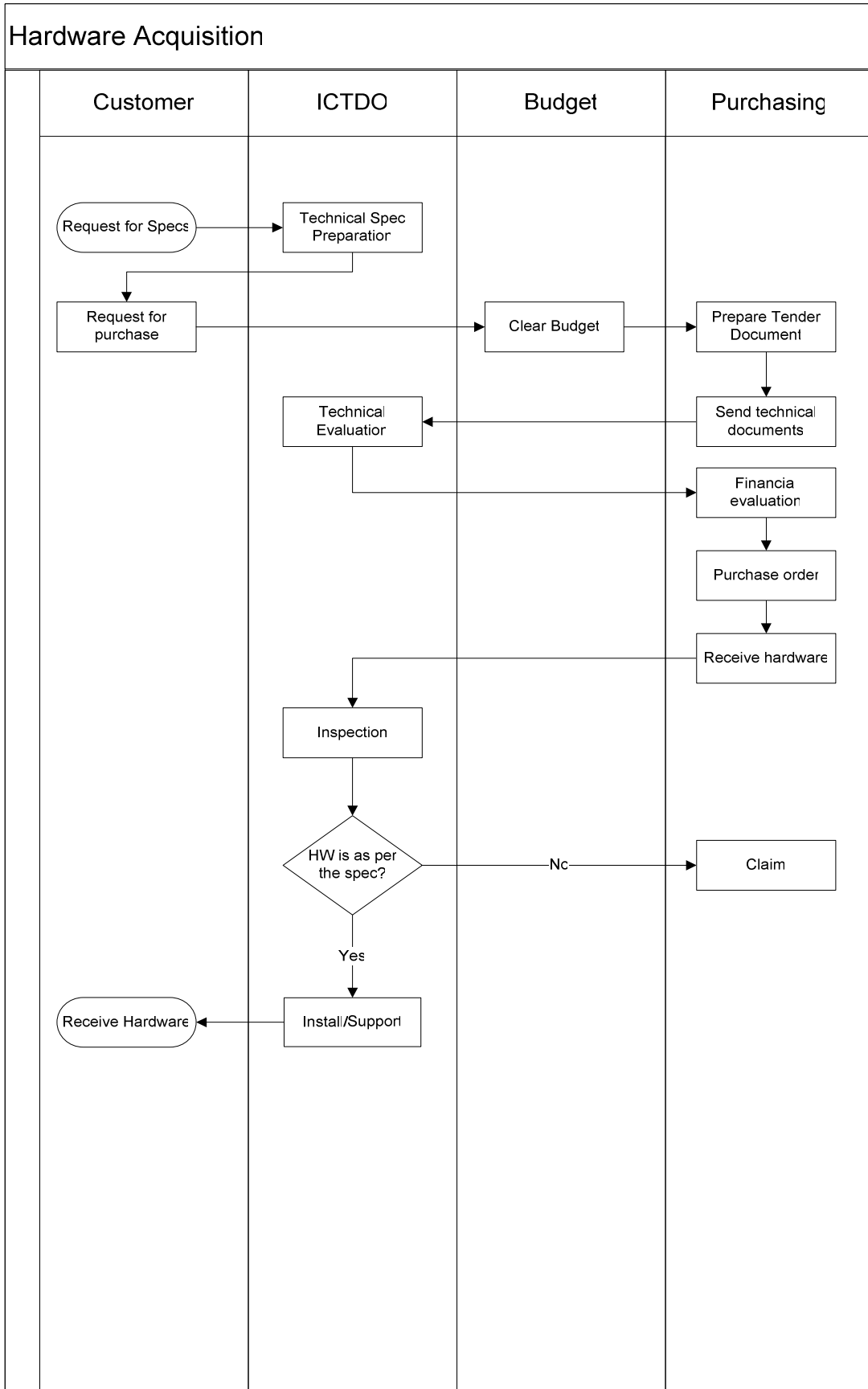
7.2.2 Connectivity – Maintenance



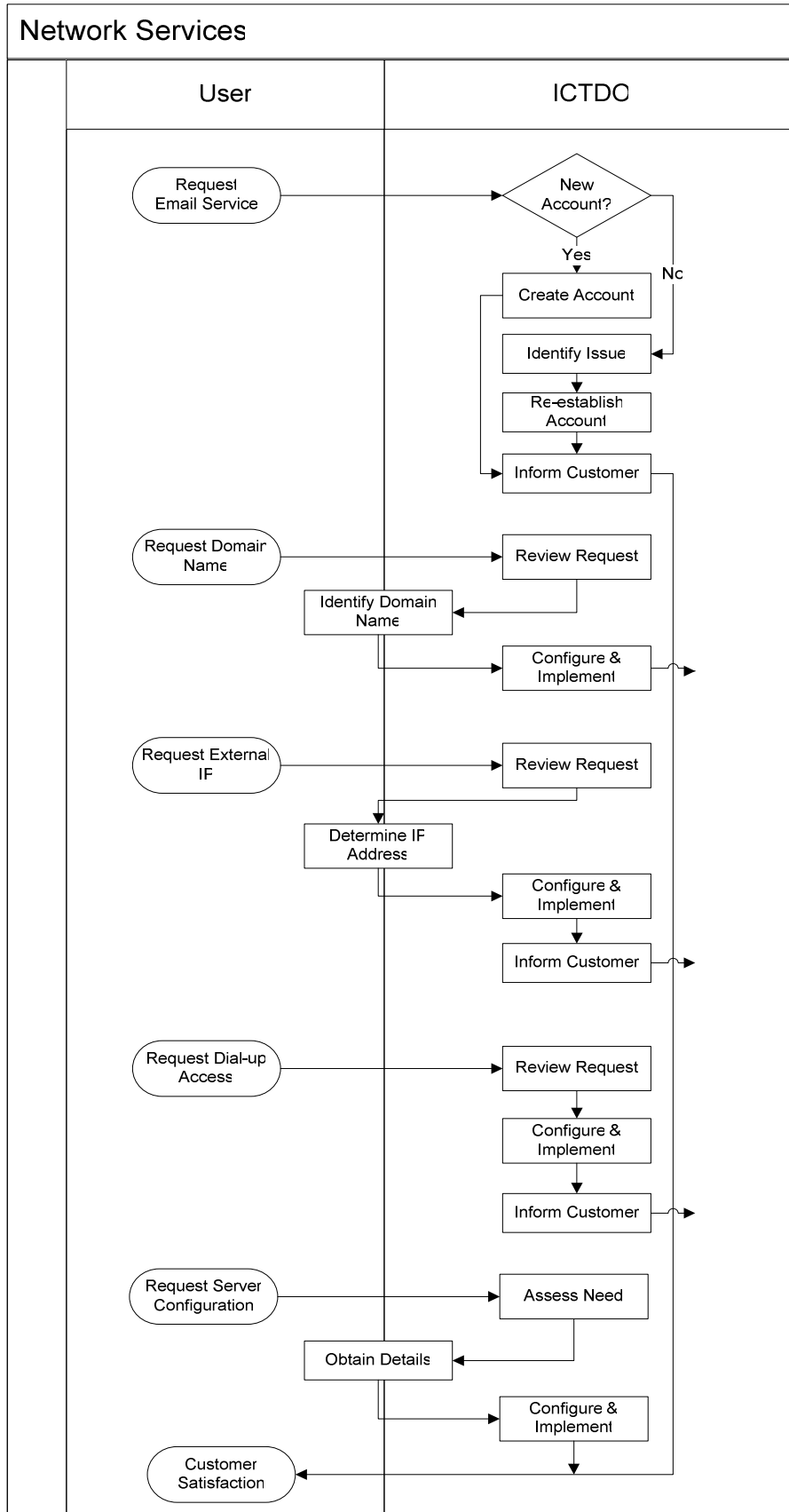
7.2.3 Hardware – Maintenance



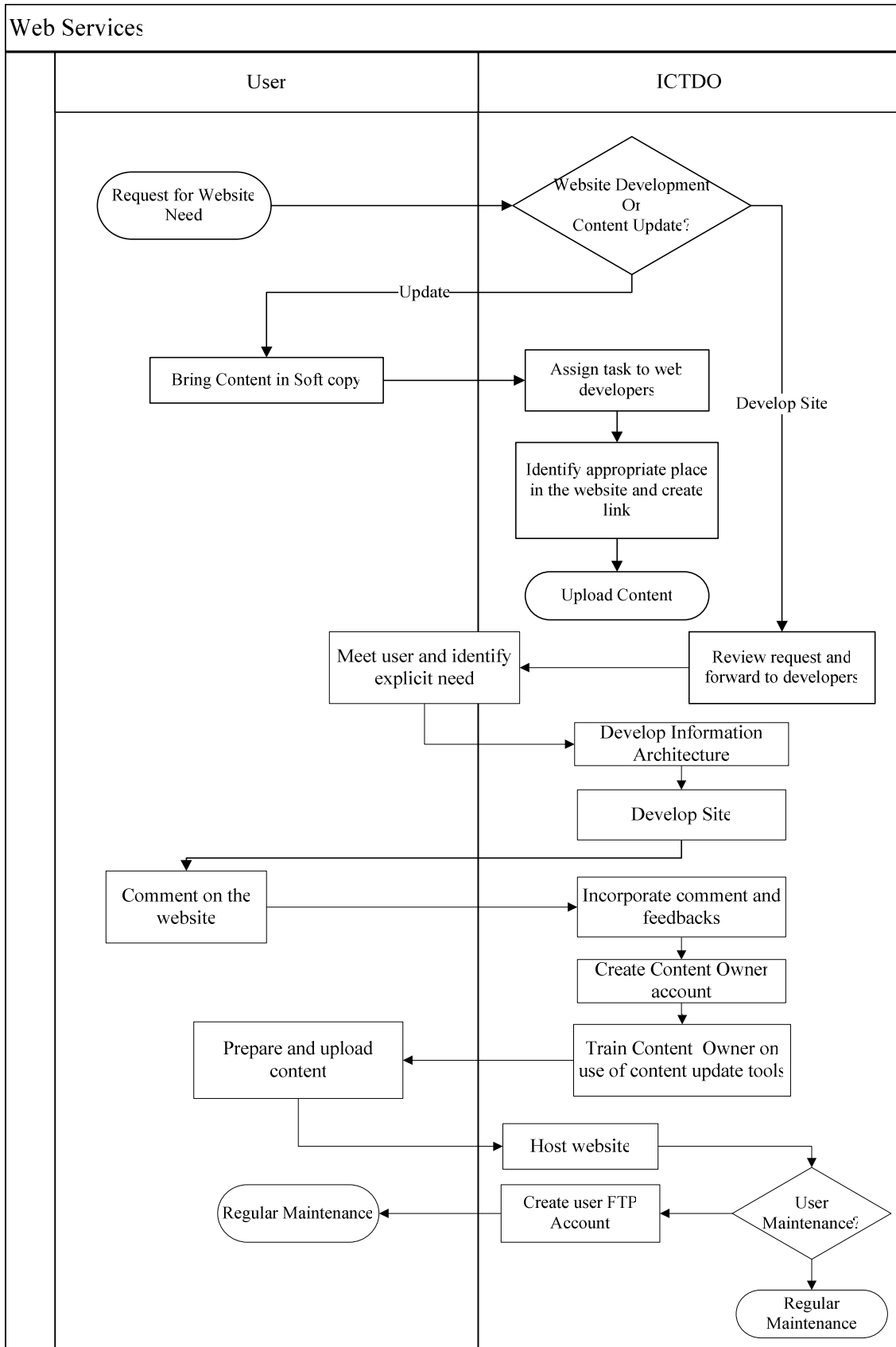
7.2.4 Hardware – Acquisition



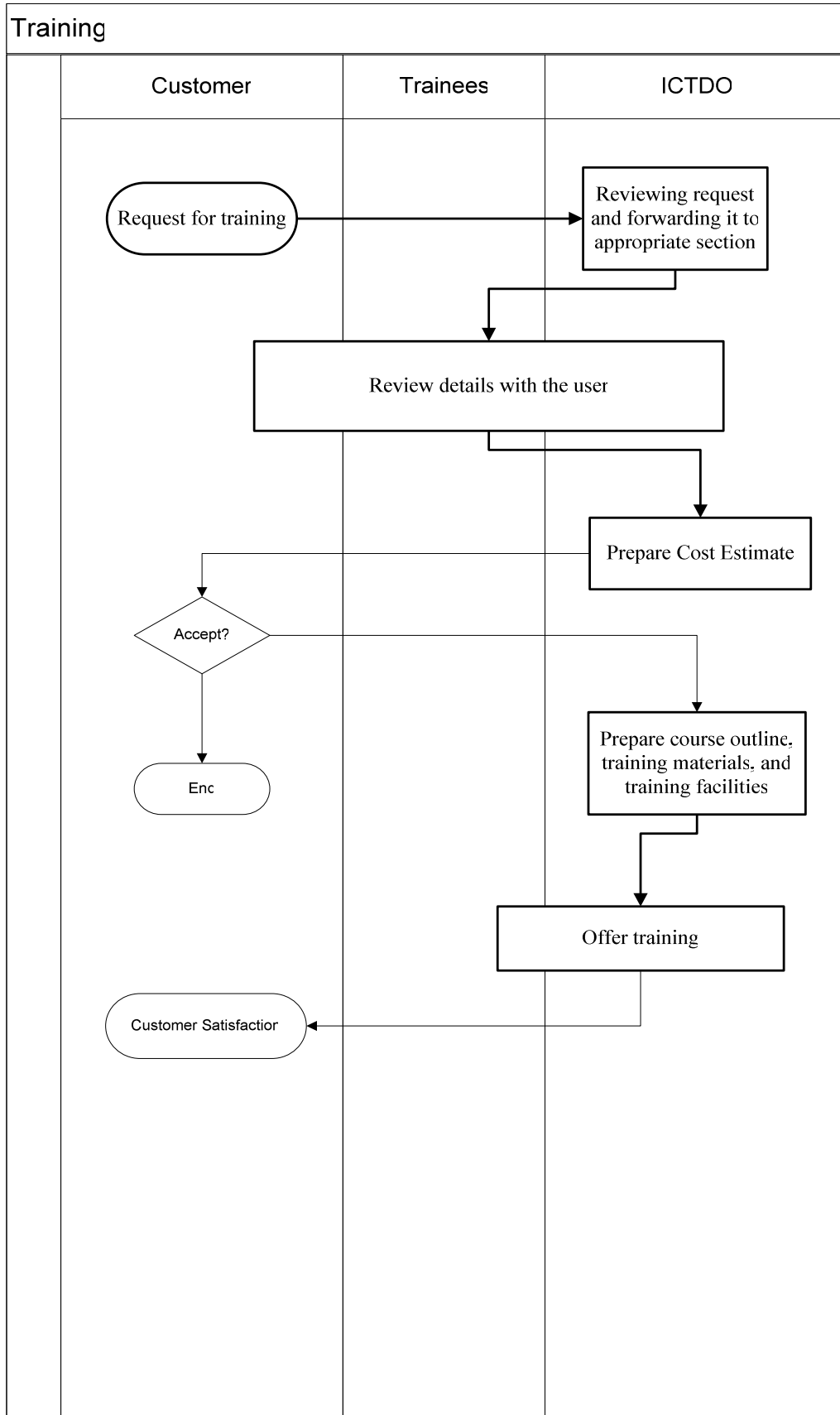
7.2.5 Network Services



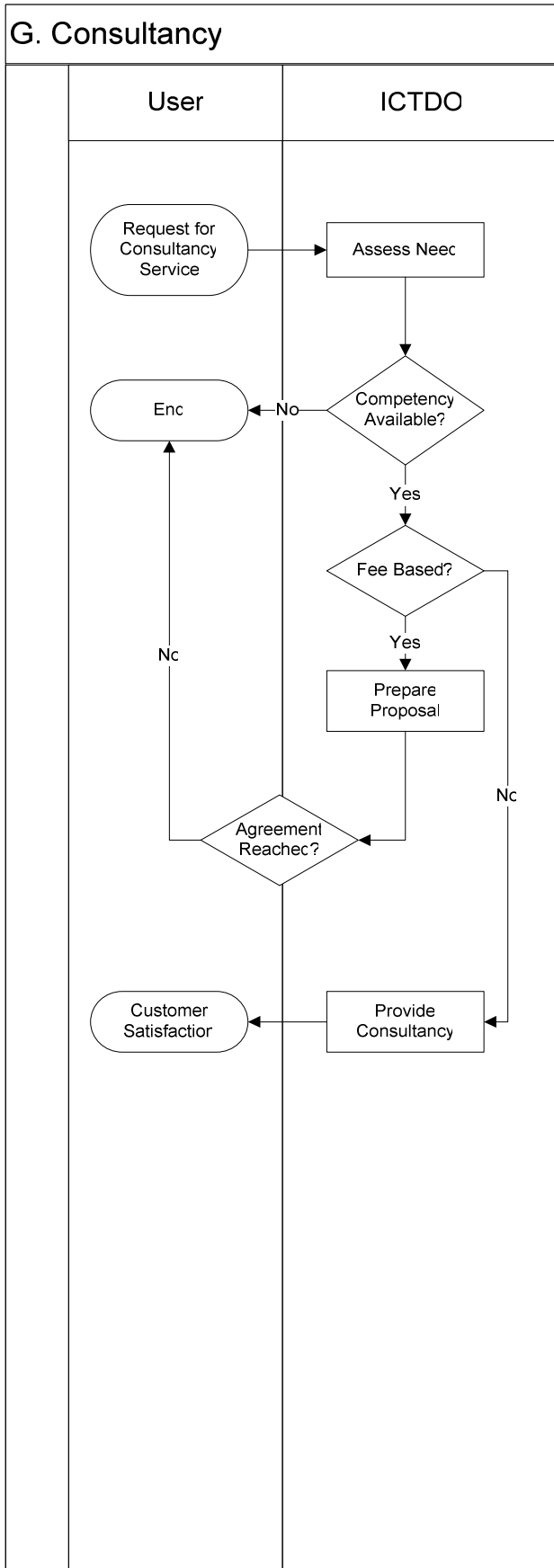
7.2.6 Web Services



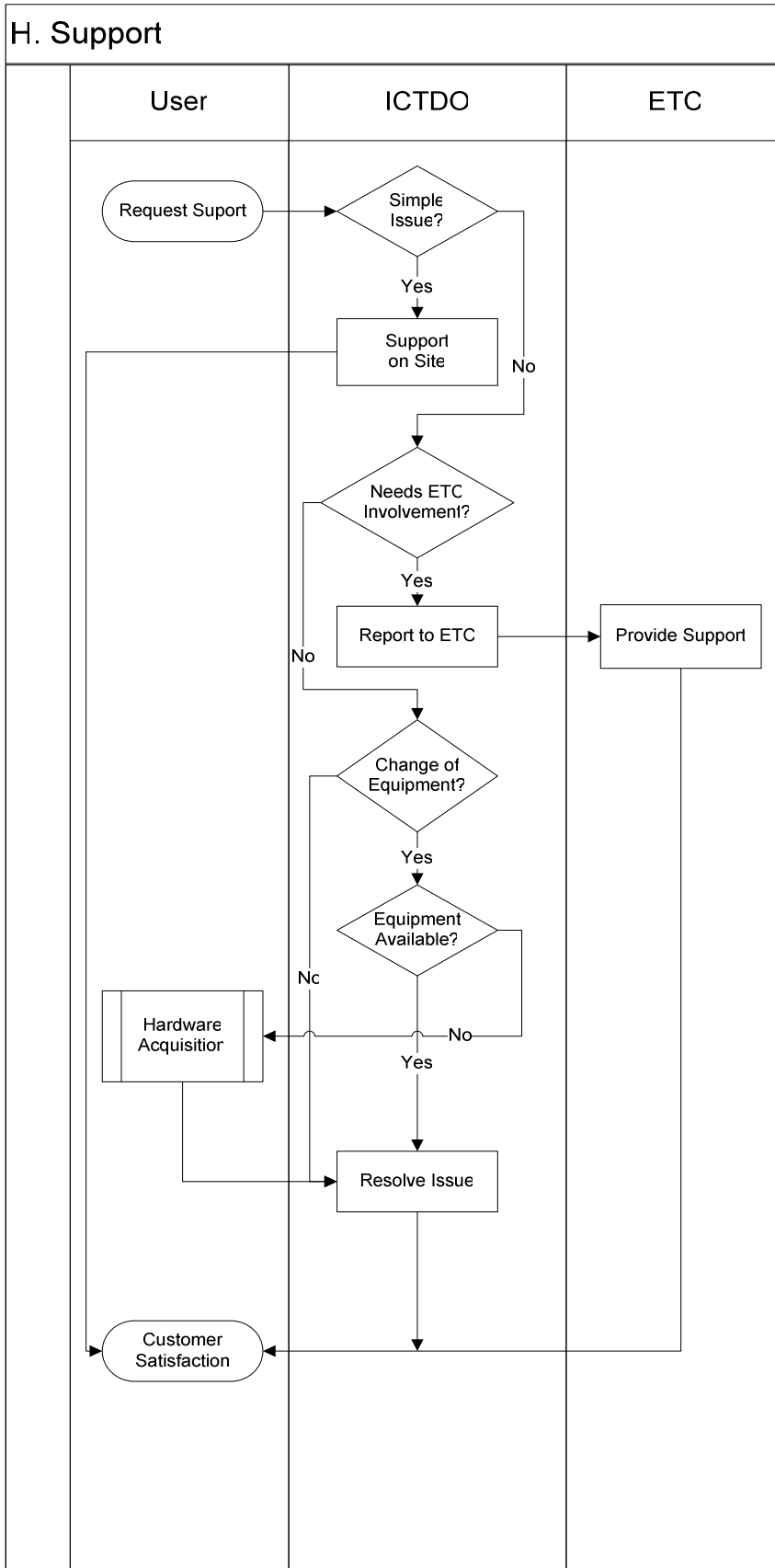
7.2.7 Training



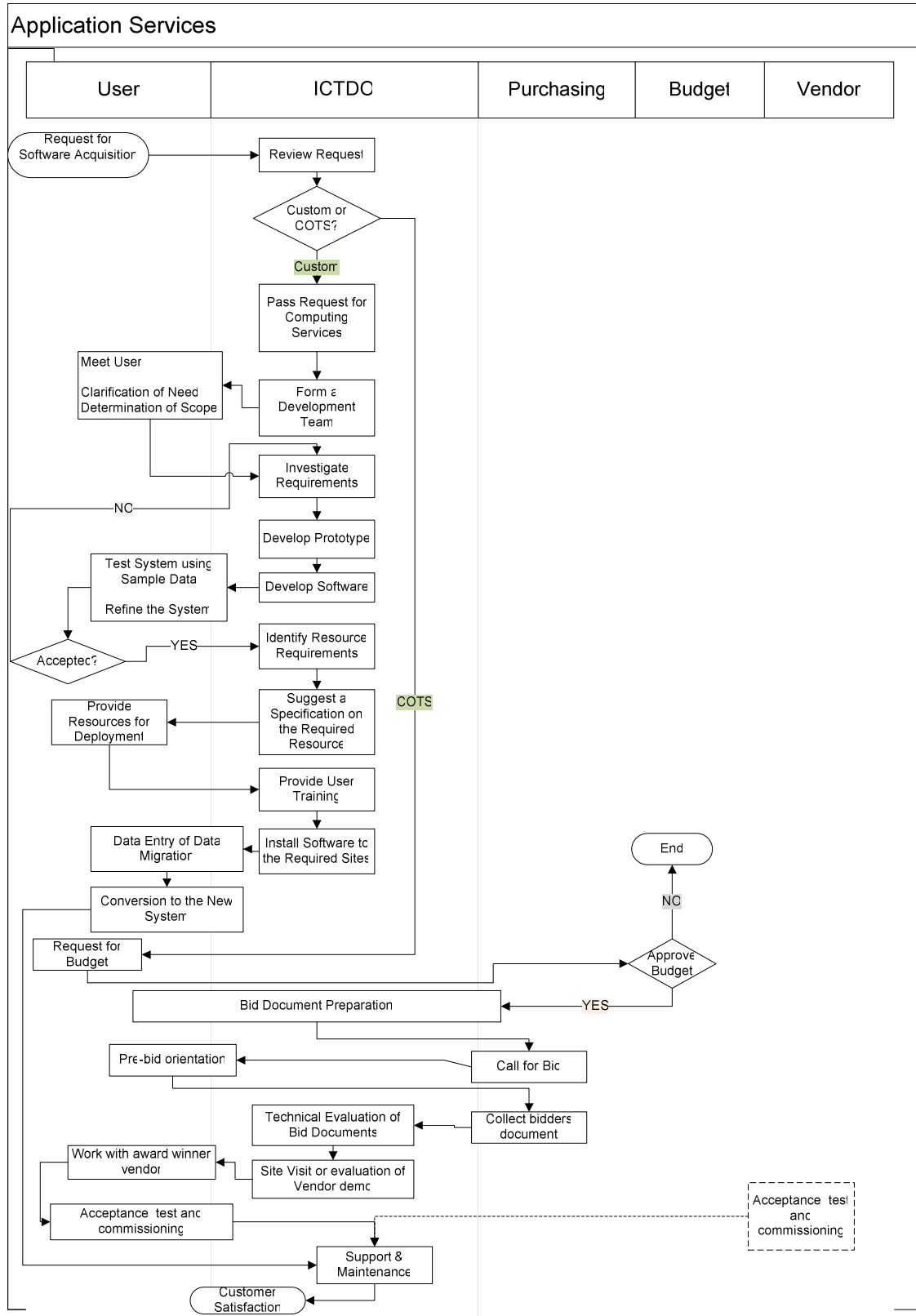
7.2.8 Consultancy



7.2.9 Support



7.2.10 Application Services



8. Performance Baseline

Process	No. of Steps	Processing Time (days) *					
		Without Purchase	With Purchase Based on Purchase Type (Pi)				
			P1	P2	P3	P4	P5
Connectivity - Installation	17	108	114	116	158	288	329
Connectivity- Maintenance	6-10	2	8	10	52	282	223
Hardware Maintenance	3-4	2	8	10	52	282	223
Hardware Acquisition	12	89	95	97	139	269	310
Network Services	3-4	1-2	-	-	-	-	-
Application Services	28	30	36	38	80	230	251
Web Services	5-13	1-90	-	-	-	-	-
Training	6	?	-	-	-	-	-
Support	4-5	1-7	-	-	-	-	-
Consultancy	2-4	2+	-	-	-	-	-

⁵ Key for Purchase Type, Pi including average processing time:

- P1 - Local purchase -Proforma (less than 5,000): 6 days
- P2 - Local purchase -Proforma (between 5,000 and 40,000): 8 days
- P3 - Local purchase -limited Tender: 50 days
- P4 - Local purchase -Open Tender: 180 days
- P5 - Foreign purchase: 221 days

* Does not include waiting time which in most case can even exceed the actual processing time.

9. Problems in Delivery of Proper ICT Services

- 1 Absence of ICT policy both for governance and acceptable resource use
- 2 Lack of proper governance and organization
- 3 Lack of awareness and competence in managing ICT resources
- 4 High attrition rate of competent ICT staff
- 5 Deficiency in infrastructure coverage
- 6 The purchase of ICT equipment either takes an unacceptably long time or is often aborted
- 7 Inadequate and poorly managed bandwidth
- 8 No university-wide standards of installations (HW/SW)
- 9 Poor property management. No university-wide inventory list of ICT equipment
- 10 Rampant use of unlicensed software
- 11 Absence of intranet content and applications, nearly non-existent automation
- 12 No security strategy and measures in place
- 13 Unacceptable network down time
- 14 Inadequate end-user computer skills and literacy
- 15 Inefficient and wasteful utilization of resources
- 16 Unnecessary redundancy in ICT initiatives, services, and resources
- 17 Much out-of-order equipment that can easily be repaired or maintained
- 18 Website filled with inaccurate, outdated, irrelevant content
- 19 Absence of ICT policy both for governance and acceptable resource use

10. Conclusion

This As-Is study reported that the situation of ICT services in the University are not in a position to adequately support and enhance the teaching/learning and research activities of the University. It was also noted that most of the academic and administrative units of the university operates manually which in turn brings lack of efficiency and effectiveness. Therefore, the way ICT services are organized and provided has to be transformed and a new dynamic system that will respond to the future needs and expectations of the University community in relation to ICT should be in place in addition to supporting the processes currently being reengineered.