

**BUSINESS PROCESS REENGINEERING**  
(CT-519)

**Instructions:**

- Attempt all questions in Section A
- Questions in Section A are related to the case study attached with your question paper. Read the case study carefully before attempting
- There is only one choice in Question 8 OR 9 in Section B

**SECTION A: CASE STUDY**

1. Summarize the case study in your own words, mentioning clearly the activities, which were performed for BPR. [10]
2. What were some of the problems that the education institution was facing before performing BPR? Why were they considered serious? [10]
3. Please refer to line # 38. In what ways can the university take a feedback from students? Give an example. [10]
4. Please refer to line # 56-58. If you were the software architect working with this university, what type of a system would you develop to ensure this problem is solved? Give details of such a system including all the modules of the system. [10]
5. Please refer to line # 93-94. Do you think it was a good decision to reduce the choice of courses taken by the students? Explain [10]

**SECTION B**

6. What are the core activities that are performed in the last phase of BPR? Explain briefly [5]
7. What are the main differences between BPR and TQM? Explain [5]
8. Explain the life cycle of a process with the help of a diagram showing clearly all the phases through which a process passes. [10]

OR

9. What is a BPR team composed of? Explain each role and draw a hierarchy chart showing the positions of different types of team members who take part in the reengineering effort. [10]

## SECTION A: CASE STUDY

1  
2 'New' university prides itself in offering a wide and flexible choice of course with a  
3 variety of modes of study. It caters for a diverse student population, enabling students to  
4 enter into further education from a range of educational backgrounds. It focuses on  
5 providing for the needs of the local region and has a high proportion of mature and part  
6 time students.

7 The university had suffered from reducing student numbers as a result of changes in the  
8 market place. Since it was formed it had endeavored to be at the forefront of progress in  
9 academic delivery and customer access, encompassing a modular approach to education  
10 provision. However, competition for students has become increasingly fierce and other  
11 universities were rapidly catching up as the sector became more commercial in its  
12 approach.

13 The university needed to make a rapid reduction in costs to match diminishing student  
14 numbers, while at the same time improving its service to customers (students), and  
15 without harming its ability to attract more students in the future. This had to be achieved  
16 against a background of already stretched academic and administrative resources.

17 In a thorough review of costs and services in its administrative support areas, the  
18 university identified opportunities to reduce costs by £1.5million in the short-term, as  
19 well as substantial scope for longer-term cost reduction and service improvement by  
20 improving IT provision.

21 The review enabled the university to identify opportunities to eliminate diversionary  
22 activity. These are activities that add no value and are usually the consequence of  
23 process failure. The turning point came when the university found that over twenty per  
24 cent of all activity was diversionary, much of which was caused by seemingly unrelated  
25 decisions made in academic areas. Not only was this a waste of scarce resource, poor  
26 service to students also resulted.

27 The problems faced by the university were common to other institutions in the sector:

- 28 • Changes in government policy and an uncertain environment.
- 29 • The introduction of student loans.
- 30 • A reducing pool of potential students.
- 31 • Changes in the student profile, for example more part time students.
- 32 • Increased competition and marketing sophistication in the university sector.
- 33 • Traditional academic cultural norms – separate power bases of authority in  
34 academic 'kingdoms' and lack of accountability between academics and support  
35 staff.
- 36 • Lack of organizational knowledge – there was no visibility of costs or the  
37 profitability of 'products' or 'customers'.

38 *Feedback from students* indicated an overall impression of good teaching staff and  
 39 reasonable facilities, but poor timetabling procedures and arrangements, inadequate  
 40 communication, lack of information and help with timetables and module choice, and  
 41 varying rules in different departments. Processes were complex, inconsistent and often  
 42 invisible both to staff and students.

43 The university undertook a two-stage process to analyze its activities. (Figure 1)

44

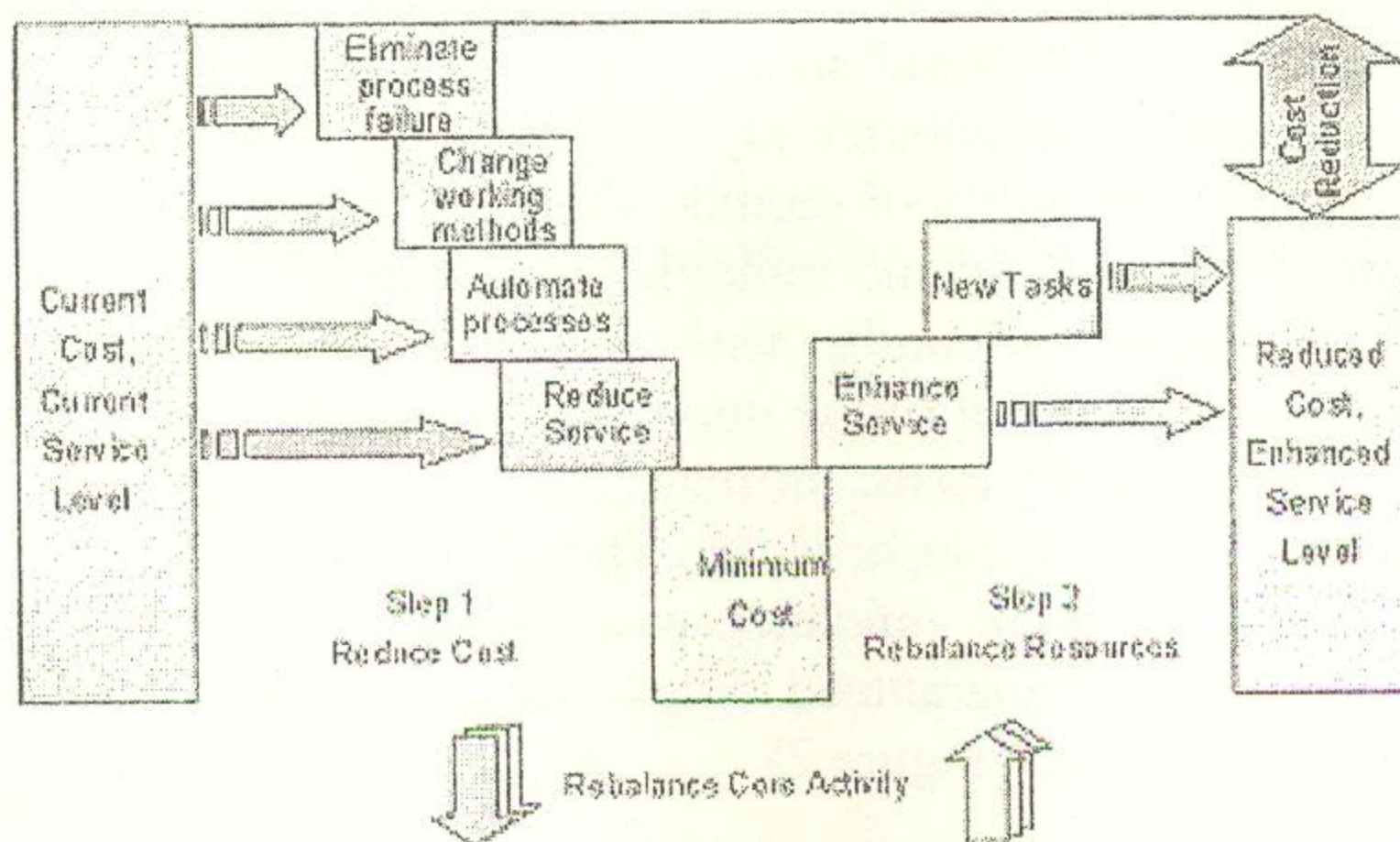


Figure 1

45

## 46 1. Reducing cost

### 47 Identify diversionary activity - and try to eliminate it

48

49 Diversionary activities add cost but no value. Much of it was not even thought by those  
 50 involved to be diversionary - it was the normal order of things for them to have to  
 51 constantly check and chase in order to get things done.

52 The university found many instances of process failure, combined with over-complicated  
 53 processes. Extra work was created by inadequate enforcement of rules and deadlines.  
 54 Academic support and administrative processes were very fragile. Bureaucracy in data  
 55 collection and record keeping compounded the problems, and records were often  
 56 inaccurate and out-of-date. *There was significant duplication of effort, particularly due to*  
 57 *varying IT provision across the university, as a result of which there was neither a single*  
 58 *student record nor a single module record.*

59 The 'them and us' culture between departments demonstrated the lack of a process  
 60 perspective in the organization. Administrative support departments often became  
 61 'victims' of decisions taken elsewhere without sufficient regard or understanding of their  
 62 effects.

63 Although the modular approach of the university required a high degree of co-operation  
 64 between departments, this was undermined by the power of the faculties, which  
 65 contributed to the extensive growth of the 'product' base.

66 In most organizations, a significant reduction in cost can be achieved by improving  
 67 working methods, strengthening cross-functional processes, exploiting Information

68 Technology (IT) and building the right skills through training. These types of chan  
69 either have no effect on the service levels currently being delivered to customers, or th  
70 improve them.

71  
72 **Analyze core activities - to identify minimum service levels**

73  
74 Core activities are those that add value by delivering customer and business needs. T  
75 university assessed which core activities could be reduced or removed and any associat  
76 risks that this would have. In particular, they focused on activities and processes that h  
77 developed in an ad-hoc fashion over time, often without any prior planning or design.  
78 A major opportunity lay in reducing the flexibility of module choice offered to studen  
79 by rationalizing the number of modules available and removing duplication. Innovatio  
80 whilst being one of the university's greatest strengths, was also inhibiting service. A  
81 overcomplicated system had developed as a result of the university's unfettered approa  
82 to increasing choice. This resulted in spiraling costs, an inability to offer the promis  
83 flexibility and a confusing and impenetrable course structure. The module choice proce  
84 was almost impossible to manage and academic guidance was undermined by modu  
85 uncertainty. Modules were offered but not guaranteed which was frustrating for t  
86 customer. The situation was getting out of hand (Figure 2)

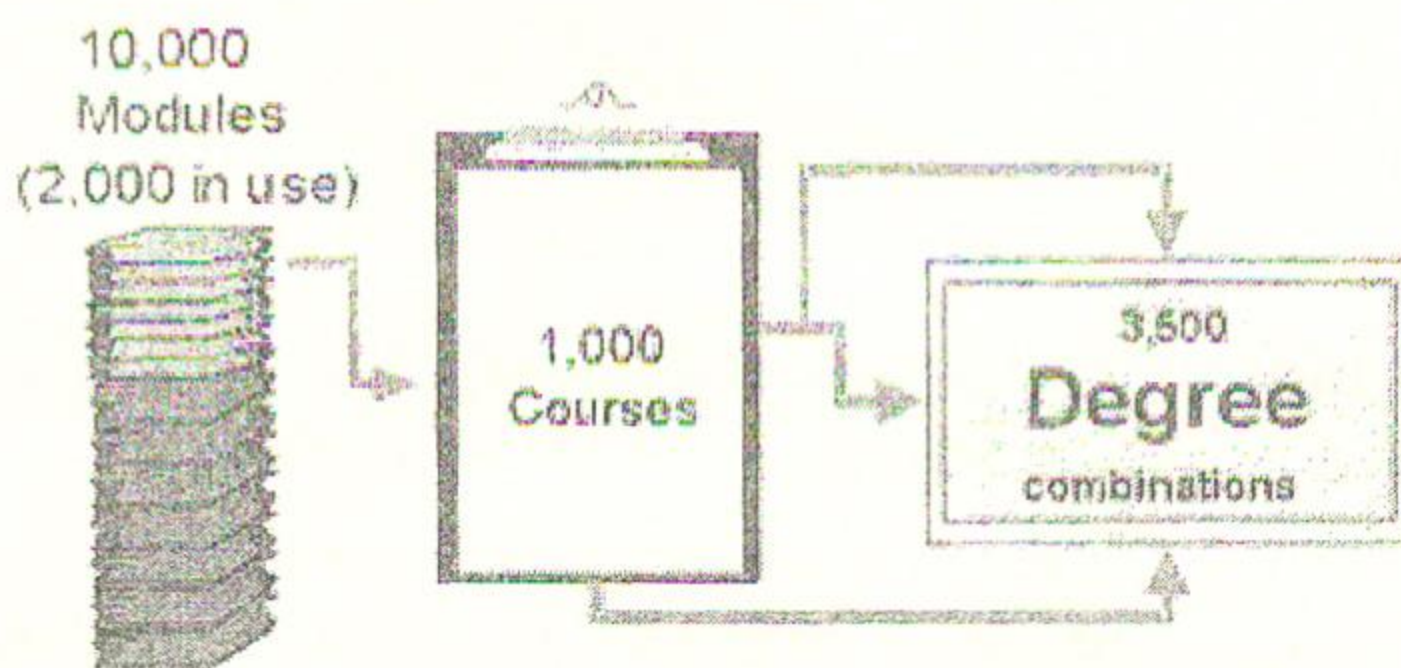


Figure 2

- 87
- 10,000 modules were written, of which some 2,000 were in use.
  - These could be combined in many ways and there were approximately 3,500 different combinations that a student could choose from.
  - More than 10% of the courses could not be delivered due to time-table problems.
- 91

92 The university decided to address this problem by:

- 93
- *Reducing choice – offering a fixed content of courses for the first semester of first year*
  - Enforcing and tightening the rules of module change and mitigation
  - Abolishing the induction week for new students – induction will now take place over the course of the first semester
- 97

- 98 • Simplification and de-duplication of the modular structure. For example some  
99 core subjects will be taught on behalf of all the faculties, instead of each faculty  
100 teaching its own.

101 Rationalization of the module portfolio, although reducing the extent of the choice  
102 available to students, meant that the university could provide a timetable that could be  
103 delivered, with fewer clashes, cancellations and with confidence in it's timetabling. The  
104 customers are now better informed and their expectations in terms of module choice and  
105 availability are largely met.

106

## 107 **2. Rebalance resources**

### 108 **Analyze core activities – building service back in**

109

110 The next step in the review of costs and services was to identify opportunities to enhance  
111 the provision of current services and to consider new activities and services not  
112 previously available to customers. Any increase in cost had to be justified by an ensuing  
113 improvement in service. The organization could then rebalance its resources in favor of  
114 critical services and away from those no longer required or considered to be of marginal  
115 value.

116 The university found that significant enhancements to service could be achieved by:

- 117 • Establishing a strategic process for managing the life cycle of modules, with clear  
118 accountabilities for product strategy, whilst still allowing local innovation.  
119 • Development of a system to model product and customer profitability  
120 • Standardization of the technology infrastructure and development of a centralized,  
121 single student record, tracking the student from initial inquiry to alumni status.  
122 • Student registration in advance of arrival at the start of the academic year  
123 • Increasing the teaching day to accommodate customer requirements e.g. part time  
124 students, and mature students with children.  
125 • A shift of focus to encompass other strengths that provides differentiation in the  
126 market place. For example, the provision of work placements, vocational  
127 modules, teaching of practical skills useful in the work place, admission with  
128 credit.  
129 • Standardization and simplification of the admissions process.  
130 • Introduction of a project management (phase gate) process for curriculum  
131 development

### 132 **Benefits demonstrated by this study**

133

134 This review captured the key benefits of the BPR approach to improving the  
135 effectiveness of support services:

- 136 • Rebalancing of resources to deliver improved services at less cost  
137 • Testing the effects of reducing/enhancing service levels on core activities

- 6-
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- 138       • Redesign of processes to deliver consistent service levels using the most efficient  
139       methods  
140       • Making effective use of Information Technology  
141       • Successfully overcoming functional barriers to improvement  
142       • Involvement of people to build commitment to change
- X —