

LIST OF TABLES

Table I. 1 Alternative solution	7
Table II. 1 Method selection	13
Table III. 1 Integration system component	21
Table III. 2 Final project completion time plan	22
Table III. 3 Actual final project completion time	22
Table IV. 1 Data description	23
Table IV. 2 Question Explanation.....	24
Table IV. 3 Question code	25
Table IV. 4 Interview result	26
Table IV. 5 Need statement list.....	27
Table IV. 6 Importance to customer code	28
Table IV. 7 Customer satisfaction code	28
Table IV. 8 Importance scale	28
Table IV. 9 Satisfaction scale.....	29
Table IV. 10 Questionnaire result	30
Table IV. 11 Validity result	31
Table IV. 12 Reliability result.....	32
Table IV. 13 Weight Average Performance.....	33
Table IV. 14 Klein grid matrix result.....	34
Table IV. 15 Need statement klein grid matrix.....	35
Table IV. 16 Goal determination	36
Table IV. 17 Improvement ratio.....	36
Table IV. 18 Sales point description	37
Table IV. 19 Sales point.....	38
Table IV. 20 Raw weight	38
Table IV. 21 Normalize raw weight.....	39
Table IV. 22 Planning matrix result.....	39
Table IV. 23 Technical response Direction of Goodness	40
Table IV. 24 Technical response specification target	41
Table IV. 25 Technical response matrix	43
Table IV. 26 Technical response relationship.....	44

Table IV. 27 Need statement and technical response relationship.....	45
Table IV. 28 Need statement and technical response relationship result.....	45
Table IV. 29 HOQ.....	46
Table IV. 30 Technical response rank.....	46
Table IV. 31 Product morphology	48
Table IV. 32 Product specificaliton option elimination	49
Table IV. 33 Product morphology result.....	51
Table IV. 34 Concept scoring score	52
Table IV. 35 Concept scoring result product reference smart band merbabu.....	52
Table IV. 36 Concept scoring result product reference smart watch.....	53
Table IV. 37 Final specification.....	53
Table V. 1 Design Validation.....	58
Table V. 2 Product comparison.....	60