



The Goal and the Journey

GCF-UK Personal Lending Relaunch: A DFSS Success Story



*October 1997
Alison O'Keeffe, Green Belt*

Why Personal Lending ?

✓ Strategic importance

- Relaunch after two unsuccessful tries
- Strategic business move to new markets (direct-to-consumer channel)

✓ Right Conditions

- Team in place with quality training
- Right Timing - developing 'Proof of Concept' trial

DFSS Benefits

✓ Focus processes on customer specifications

- Design processes around customer specification limits
- Define measurement requirements on processes
- Control process
- DMADV model designed for this type of project

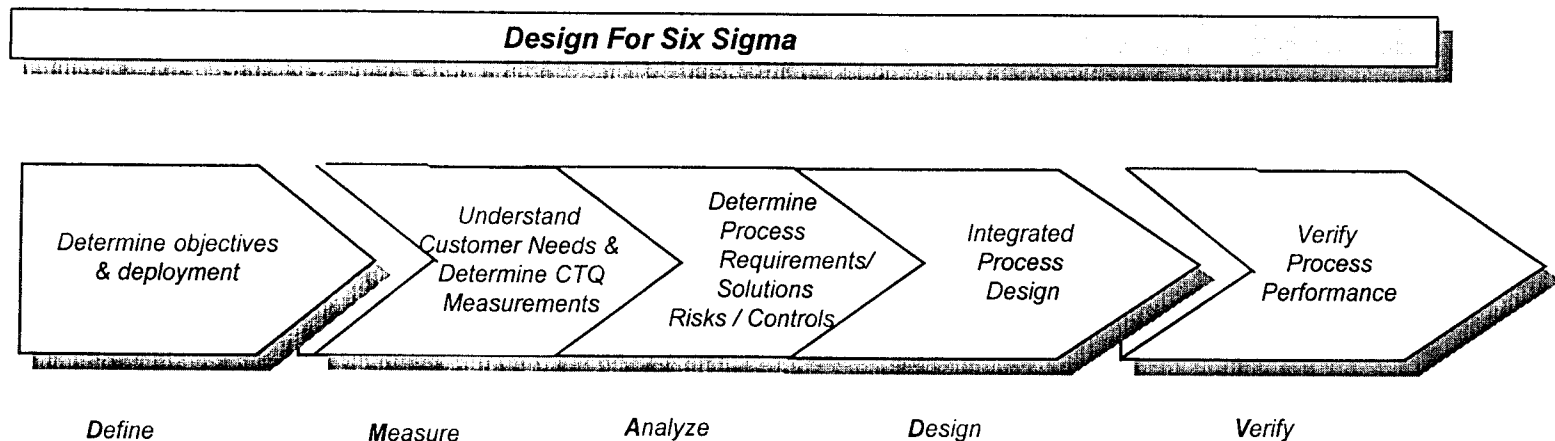
✓ Prepare for full scale Roll - Out

- Set stage to improve 'Proof of Concept' process through DMAIC model
 - Measure capability of existing process
 - Identify process Gaps
 - Redesign to fill Gaps

**Customer Expectation Focus
for New Product Introduction**

Logical & Rigorous Approach To New Process Design . . .

DFSS Roadmap Applied in Personal Lending



Deliverables:

- | | | | | |
|--|---|---|--|---|
| <ul style="list-style-type: none"> • NPI Objectives • Deployment • Business process concept | <ul style="list-style-type: none"> • CTQ's • High level process design • Measure customer expectations • Set Specification limits | <ul style="list-style-type: none"> • Process Requirements • Control gaps in process • Process risk assessment • Controls for measures and risks • Process flows / data flows | <ul style="list-style-type: none"> • Design modelling /simulation • Measurement & Risk Control plan • Detailed process design | <ul style="list-style-type: none"> • Service Level Specs Verification • Apply DMAIC |
|--|---|---|--|---|

... Requires Strong Business Discipline

Define Project Goals

➤ Proof of concept

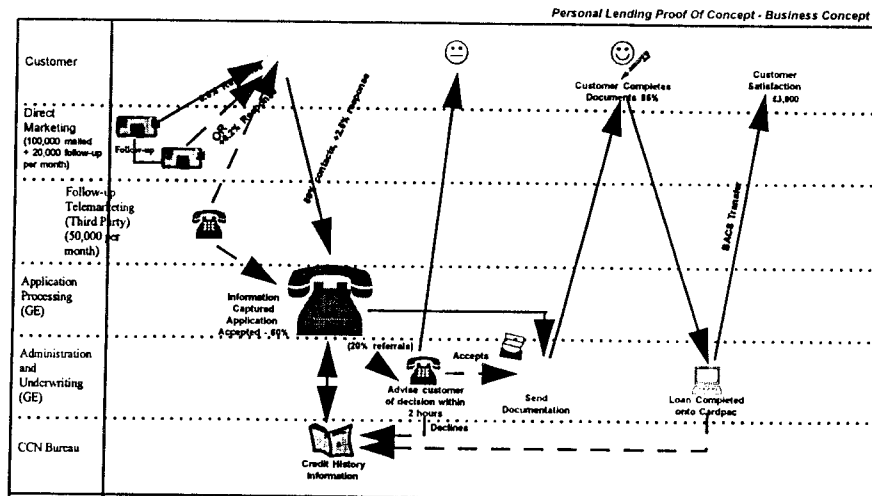
February 97 - July 97

- Test 3 key variables
 - Direct mail response rate > 0.5%
 - Follow up telemarketing response rate > 2.5%
 - Delinquency < 7%
- Timing - 6 months + evaluation phase
- Outsource mail & telemarketing
- Basic development to support Proof of Concept
- Customers Targeted - 300,000 from PLCC base

Project Team

Champion	Andy Haste - CEO
Sponsor	Paul Mackin - Operations Director
MBB	Dieter Wohrle, CAS (Steve Alsop)
BB	Alison O'Keeffe - Project Manager
Core Team	Mark Goldman - Operations
	Helen Johnson - Marketing
	Ben Pattison - Risk
	Ben Nneji - Global Modelling

Business Process Concept



NPI Project Management

Planning / Control using the Goal Directed Project Management (GDPM) approach - Coopers & Lybrand

Key Tools

- Milestone Plan
- Project Responsibility Matrix
- Activity Planning

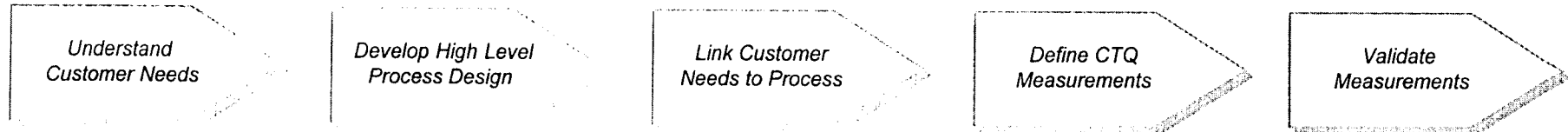
Benefits

- Focus on Results, based on milestone plan
- Multi-layer control
- Strong framework - critical for this type of project

Need to Clarify Objectives & Deployment

Measurement Phase For DFSS ...

Measurement Process



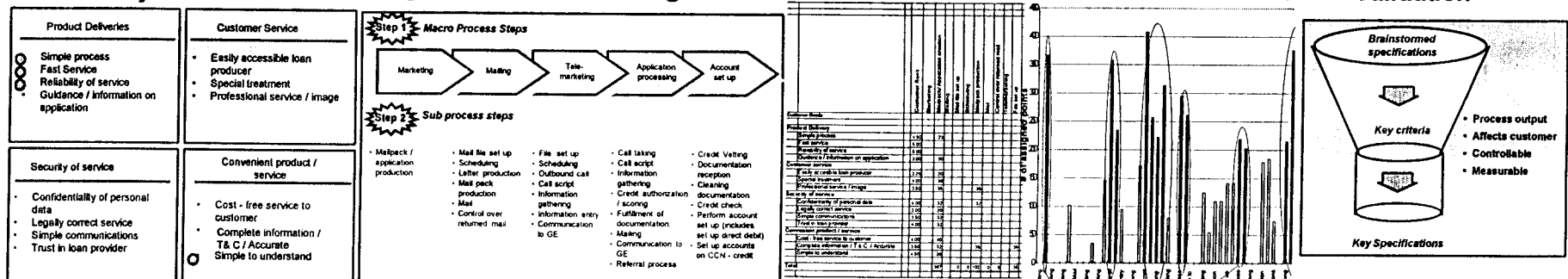
Applied Tools

- Customer Survey
- Brainstorm
- Process Run-through
- Quality Function Deployment (QFD matrix)
- Brainstorm
- Checklist against set criteria

Deliverables

- Customer needs list
- Motivations / decision making process
- High level process design (macro & sub process steps to deliver service)
- Prioritize Customer Needs
- Rate process steps importance to Customer Need
- Prioritize Process Steps (Pareto)
- Measurement definition (metrics / description)
- Ensure measurement characteristics are related to customer and process

Customer Needs from Survey



○ Identified as Key Customer Needs

Main grouped process steps

Ensure Process Design Will Address Customer Needs

[illegible]

Rank 1-10

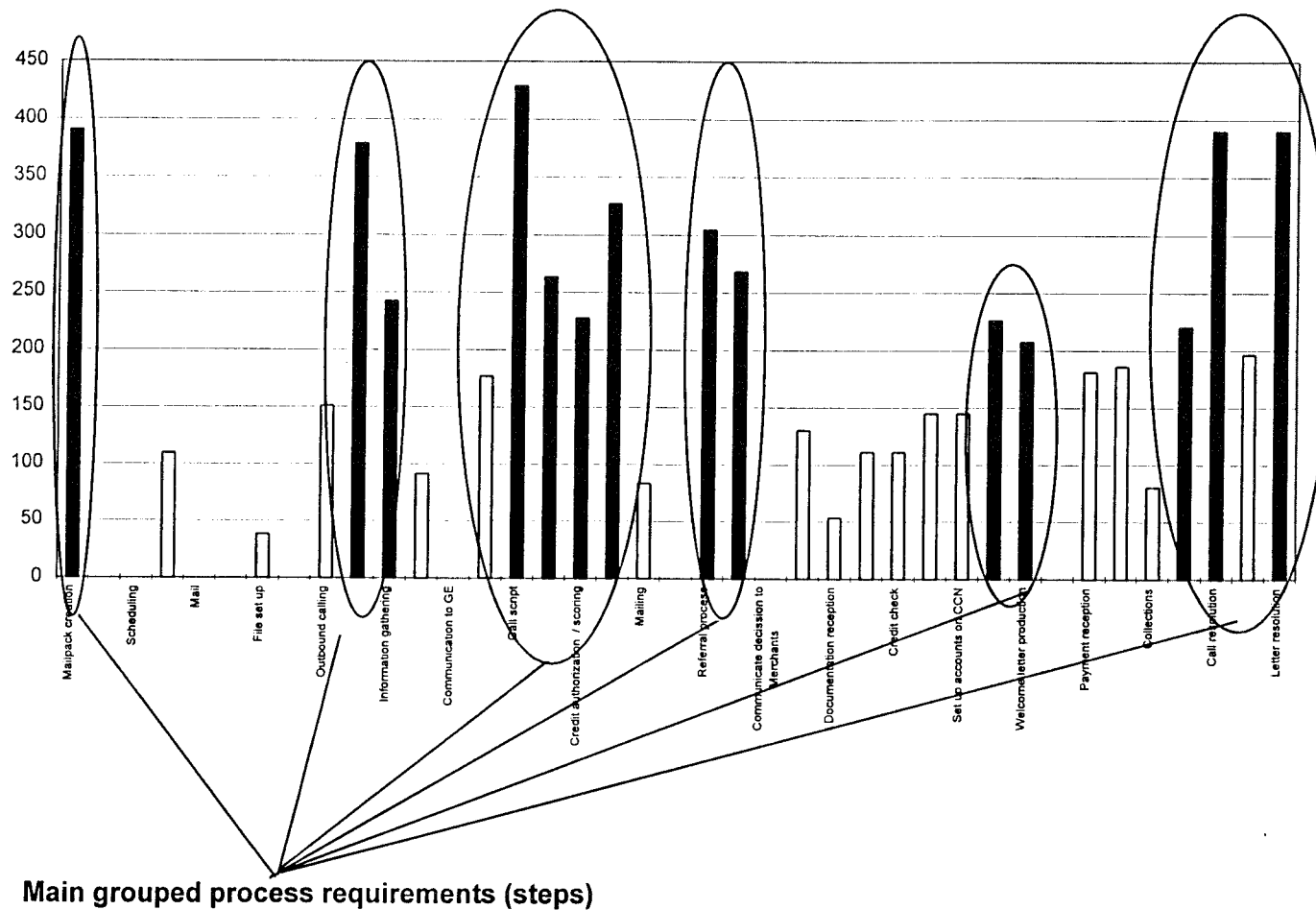
Identify “Moments of Truth”

QFD Matrix: Multiply out to give Total Scores

[illegible]

Weighted Matrix allows Identification of Key Process Steps

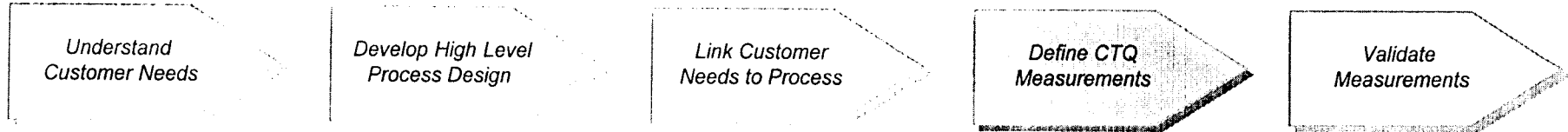
QFD Matrix: Pareto Presentation



Visualise for Easy Identification of Key Process Steps

Measurement Phase For DFSS ...

Measurement Process



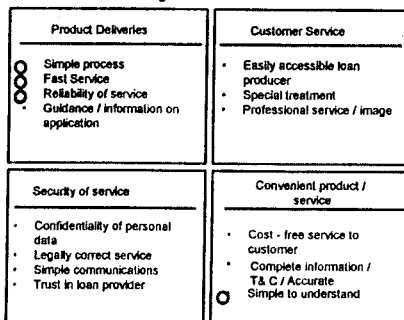
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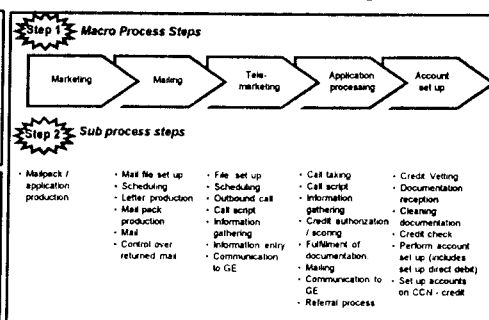
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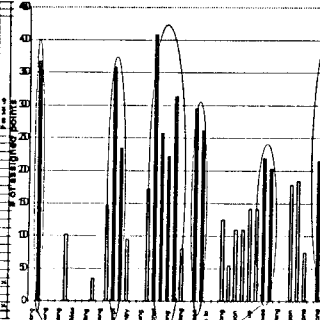
High Level Process Design



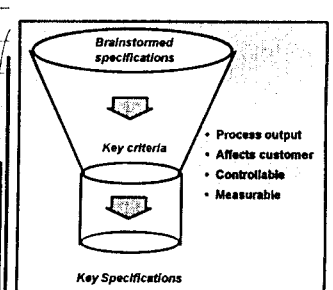
QFD Matrix

Customer Needs	Customer Benefit	Marketing	Mailing	Telemarketing	Application processing	Account set up
Product Quality						
Simple process	1.00	1.00	1.00	1.00	1.00	1.00
Fast service	1.00	1.00	1.00	1.00	1.00	1.00
Reliability of service	1.00	1.00	1.00	1.00	1.00	1.00
Guidance / Information on application	1.00	1.00	1.00	1.00	1.00	1.00
Cost & to customer	1.00	1.00	1.00	1.00	1.00	1.00
Complete product / service	1.00	1.00	1.00	1.00	1.00	1.00
Legal / Fair service to customer	1.00	1.00	1.00	1.00	1.00	1.00
Simple communication	1.00	1.00	1.00	1.00	1.00	1.00
Simple to understand	1.00	1.00	1.00	1.00	1.00	1.00
Total	1.00	1.00	1.00	1.00	1.00	1.00

Pareto



Validation



Rigorous Approach to Measurement Phase

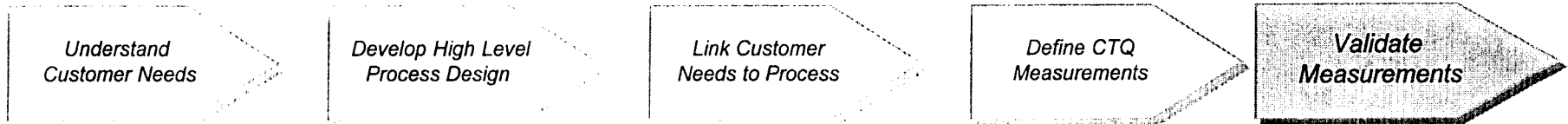
Clearly Define Measurement Ideas

Measurement	Description
Creation of mailpack	
Response rate	The number of inbound telephone applications or application forms received as a direct result of the mailing, even where the addressee has passed it to someone else.
Market research	A survey on a proportion of the customers mailed, to understand their reaction to the mailpack.
# of complaints / queries	The number of letters or calls which criticise the mailpack - its layout, images, tone, guidance etc.
# of data errors	The number of corrections notified to our existing data (e.g. name misspelled)
# of mis-matched items in pack	(The number of complaints (letter or telephone) relating to items missing or duplicated in the mailpack. (Also the number of items missing or duplicated identified through random quality checking at production)
Telephone Application	
Ring time	The length of time before the call is answered.
Length of call	The length of time to complete the call.
Abandon rate	The proportion of callers who hang up before we answer them (above a fixed level to identify where we have genuinely been slow to answer, as opposed to the customer's patience).
# of data errors	
- existing info	The number of corrections notified to our existing data (e.g. name misspelled).
- input info	The number of corrections identified to the on-line inputting.
# of complaints	The number of letters, calls, or comments during a telephone application which complain about the telephone application service.
# of applications to be 'redone'	The proportion of applications which require reprocessing due to data input errors (split by new and existing data).
Service non-availability time	
- System availability / downtime	The proportion of time that the system is unable to support the application process.
Overall Customer Satisfaction	Customer satisfaction levels with the telephone application service, measured through surveying a sample of callers.
Compliance to script	The number/proportion of deviations from the script, measured through sample call monitoring.



Clear Definition helps Next Step - Evaluation

Completing the Measurement Phase....

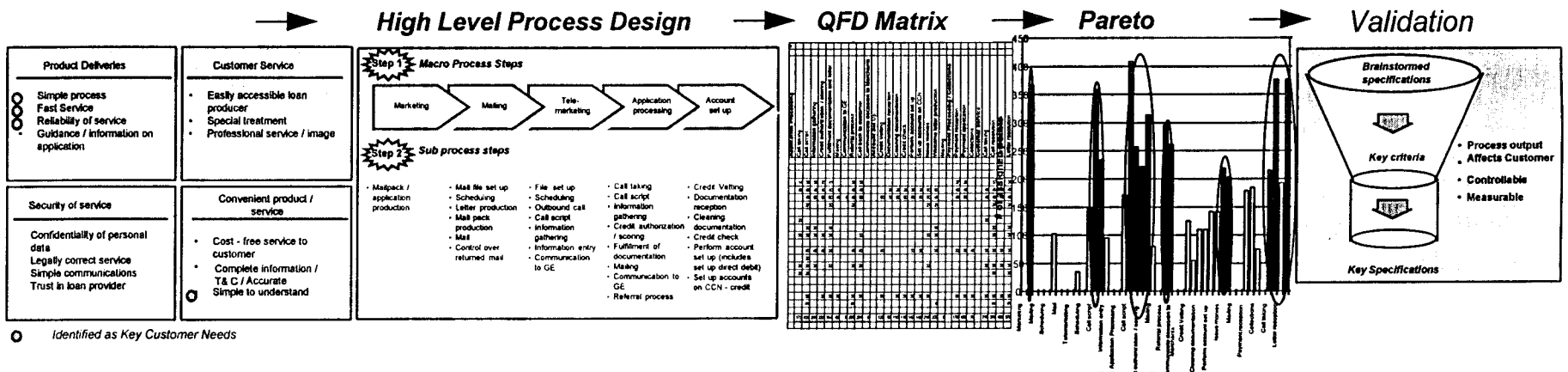


Applied Tools

- Customer Survey
- Brainstorm
- Quality Function Deployment (QFD matrix)
- Brainstorm
- Checklist against set criteria

Deliverables

- Customer needs list
- High level process design (macro & sub process steps to deliver service)
- Prioritize Customer Needs
- Measurement definition (metrics / description)
- Condensed list of measures, directly relevant to Process and Customer
- Motivations / decision making process
- Rate process steps importance to Customer Need
- Prioritize Process Steps (Pareto)



Rigorous Approach to Measurement Phase

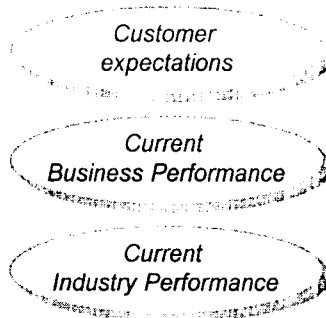
Check Measurement Ideas meet 4 Key Criteria

	Process Output?	Affects Customer ?	Controllable?	Measurable?
<u>Creation of mailpack</u>				
Response rate	Yes	No	No	Yes
Market research	No specific measurement	No specific measurement	No specific measurement	No specific measurement
# of complaints / queries	Yes	Yes	Yes	Yes
# of data errors	Yes	+ / -	Yes	Yes
# of mis-matched items in pack	Yes	Yes	Yes / quality checks	Yes
<u>Telephone Application</u>				
Ring time	Yes	Yes	Yes	Yes
Length of call	Yes	Yes	Yes	Yes
Abandon rate	Yes	Yes	Yes	Yes
# of data errors				
- existing info	No	Yes	Not easily	Yes
- input info	Yes	Yes	Yes	Yes
# of complaints	Yes	Yes	Yes	Yes
# of applications to be 'redone'	Yes	Yes	Yes	Yes
Service inability time	Yes	Yes	Yes	Yes
- System availability / downtime				
Overall Customer Satisfaction	Yes	Yes	Yes	Yes
Compliance to script	Yes	Yes	Yes	Yes / MTE
<u>Referral</u>				
Call back time	Yes	Yes	Yes	Yes
# of referrals	Yes, but affected by risk policies	Yes	Difficult	Yes
# of complaints	Yes	Yes	Yes	Yes
# of contacts to get loan	Yes	Yes	Yes	Yes
Call duration	Yes	Yes	Not controllable, depends on need	Yes
Calls that do not meet set call back time	Yes	Yes	Yes	Yes

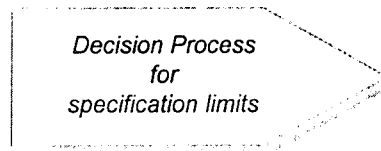
Setting Specification Limits Based On Customer, Industry And Business Capabilities

Process

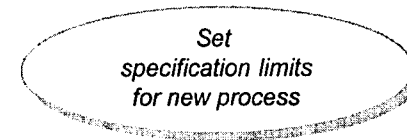
Obtain relevant information



Evaluate information



Informed Judgment



Working Example - Ring Time on Application processing

	Competitors					Business	Customer	Set specification for process
	Lombard Tricity Finance	Mercantile Credit	M & S	HFC Hamilton Direct	Bank of Scotland Direct	GCF - UK Personal Lending	Customer (current Personal Lending calls)	
	<i>in seconds</i>					<i>in seconds</i>	<i>in seconds</i>	
Average	5.19	5.10	2.12	4.10	6.00	1.55	137.58	Average 4 seconds for 'Proof of concept'

**Informed Specification Setting
Key To Process Design**

Determine Process Requirements

Approach Used to Identify Process Requirements

Input

- CTQ Specification Limits
- High Level Process Design

Process

- Review process (**controllable vs not controllable** by business)
- **Integrate** CTQs into process design
- Apply CTQ's specification limits to identify process requirements

Output

- Process requirements
- Process controls

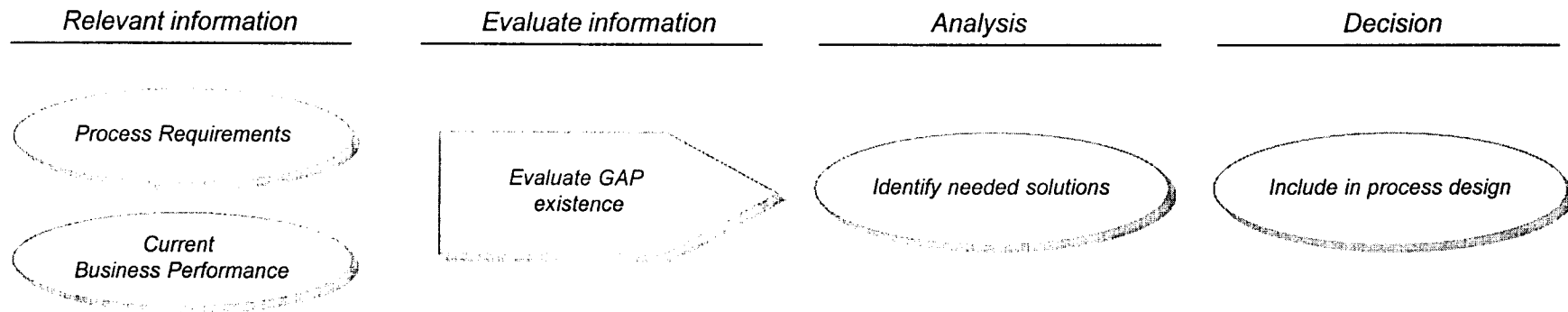
Working Example

CTQ measure	Spec Limit		CTP measure	Process Requirement
Ring Time - Application Processing	4 seconds	• Application Processing operated in-house • CTQ and Process Requirements are equal	Ring Time - Application Processing	4 seconds
•Speed of fulfilment - issuing money	Same day/ Next day	• Bank needs 3 days to transfer money by BACS to customer account (external process) • Internal Process Requirement = 1 day • (Review cheque/courier option for Roll-out)	• Speed of fulfillment - issue of money	1 day

Internalizing Customer Specifications

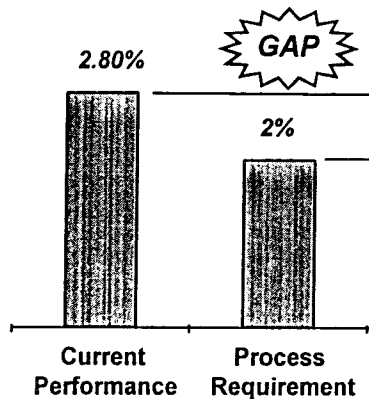
Determine Process Capability Gaps ... Define GAP and Identifying Solutions

Process



Working Example 1)

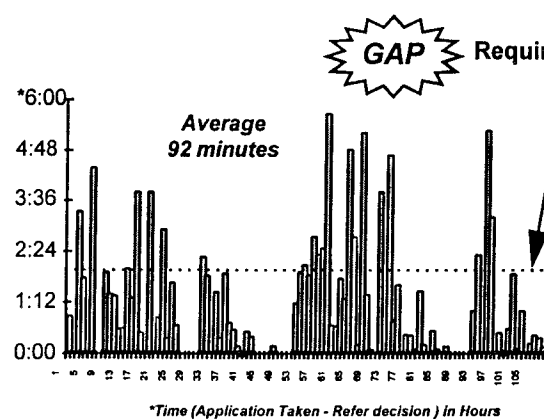
Phone Abandon Rate



Solution
Revise Resourcing Plan
for future planned volumes
and process requirements

Working Example 2)

Call Back Time on Referrals*



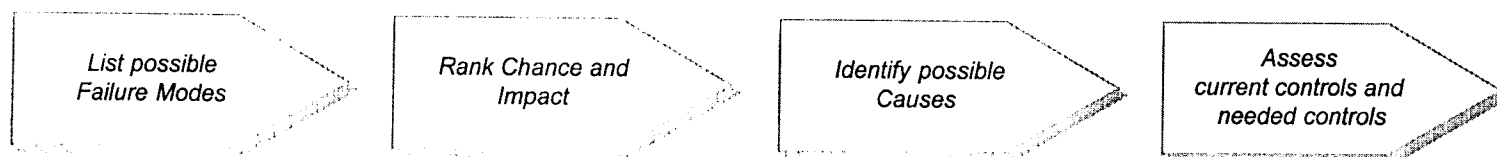
Peaks analysed - root
causes identified

- Solution**
- New procedure to ensure customer always called back within 2 hours (decision/status)
 - For 'Proof of Concept' not automated

... To Improve Design by Addressing Gaps

Design Review - Process Risks

Process Steps



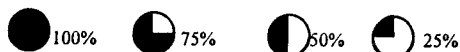
Deliverables

- List of possible process risks
- Prioritize (if needed) chance and impact of failure modes
- Brainstorm possible rootcauses
- List of current controls
- List of possible new controls

Working Example

Process Risks	Chance	Impact	Causes	Current Controls	Additional Controls Recommended
Mailing records incorrect			• Tape verification	• None for this type of activity	• Define data validation process and ensure full sign-off
Customer hangs up			• Ring time too long	• Monitor ring time through QueueLink • Overflow to Admin. team	• Contingency: Increase staff levels
We lose the application			• Lack of tracking • System failure	• Reissue docs • Reissue docs	• Diary track case progress
No incoming mail/ documentation not received by GE			• Postal strike • Extreme weather • Lost in post • GE lost when receive	• None - Beyond our control • None - Beyond our control • Reissue docs • Reissue docs	• Diary tracking

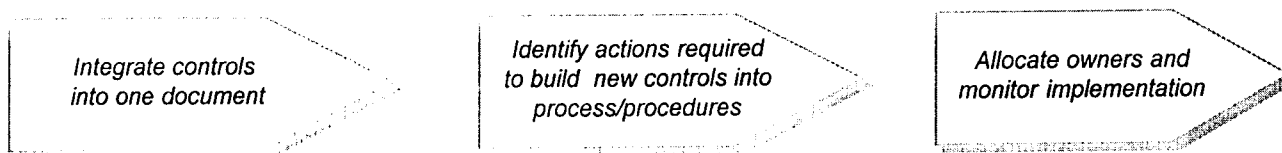
KEY:



Addressing Potential Process Risks

Integrate Risk and Measurement Controls into Process Design

Process Steps



Deliverables

- Document listing all risks, measurements, specifications and controls (new and existing) by process step
- Action plan
- Actions Log - progress check

Working Example

Risk/Measurement	Specification (if applicable)	Control	Owner
Number of rejected BACS transfers	0	BACS daily update report	Les Birkbeck
Speed of fulfilment: issuing Welcome Pack	Same day that account is set up on Cardpac	Cardpac variance report	Les Birkbeck
Number of rejected Cardpac account set-ups	0	Cardpac variance report	Les Birkbeck
CUSTOMER SERVICE			
Ring time	10 seconds	Queuelink check	Les Birkbeck
Correspondence response time	Acknowledged on day of receipt and resolved within 3 working days.	MIS	Les Birkbeck
		Diary tracking	Les Birkbeck

Design phase made simple through earlier work

Lessons Learned

☐ **Timing**

- DFSS Approach to be initiated at the start of the overall project
- Project plan to include specific DMADV milestone before main project execution
 - removes risk of rework
 - ensures team are fully able to support DFSS

☐ **Tools**

- Easy to use despite technical names
- Capacity-planning software could be valuable

☐ **Training**

- Need for specific quality training for team before starting project

☐ **Output**

- DFSS Approach does not ensure 'six sigma' process the first time, but it puts the process into a controlled stage in preparation for DMAIC.