European QRM Centrum

Competing on time – world wide

Business Case Workshop

www.**qrm-centrum**.nl

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Spare capacity

We invest money in warehouses, not in extra machines

Direct labor does puchasing, order acceptance,… what happens to purchasing staff?

Reduce white space

But what does it cost?

How to convince management and owners?

Fast quotes, more sales… We work in a declining market

Some refelections on the case for speed

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What we'll be doing in this workshop

Why is speed important to you?

Traditional accounting versus QRM

Building the business case

Some illustrations

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The European QRM Center

Founded 2010 by the HAN University of Applied Sciences

Together with QRM Center Wisconsin, USA and the University of Groningen

Under auspices of prof. dr. Rajan Suri

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EUROPE

Purpose and scope European QRM Center

Develope and promote QRM knowledge and exchange experience with QRM

In joint cooperation with market parties: companies, consultancies, academic institutes, branche organisations

Activities

QRM MasterClasses

Projects with students and professors

Publications

Company visits

QRM Conference 2012 – first outside USA

Intervisiedag met QRM-RAAK partners

In het RAAK project gaat het om de ontwikkeling van nieuwe ORM (Quick Response Manufacturing) methodieken die ondernemers in het MKB helpen om antwoord te geven op toenemende eisen van

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Vincent Wiegel

Economist, Philosopher

HAN Professor Lean

Director European QRM Center

“Half the time I’m wrong”

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Cost & benefit drivers

Focus on cash

Translating speed to cash

BUSINESS CASE DRIVERS

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Why cash is important

A new approach proving itself:
cash is unambiguous

No accounting discussions
they'll pop-up anyway

Forces focus on root-causes – getting to the bottom

Where in the accounting system do you find 'white space'?

Hidden costs of unit cost focus

Whence comes the additional turn-over?!

Whence go the savings?!

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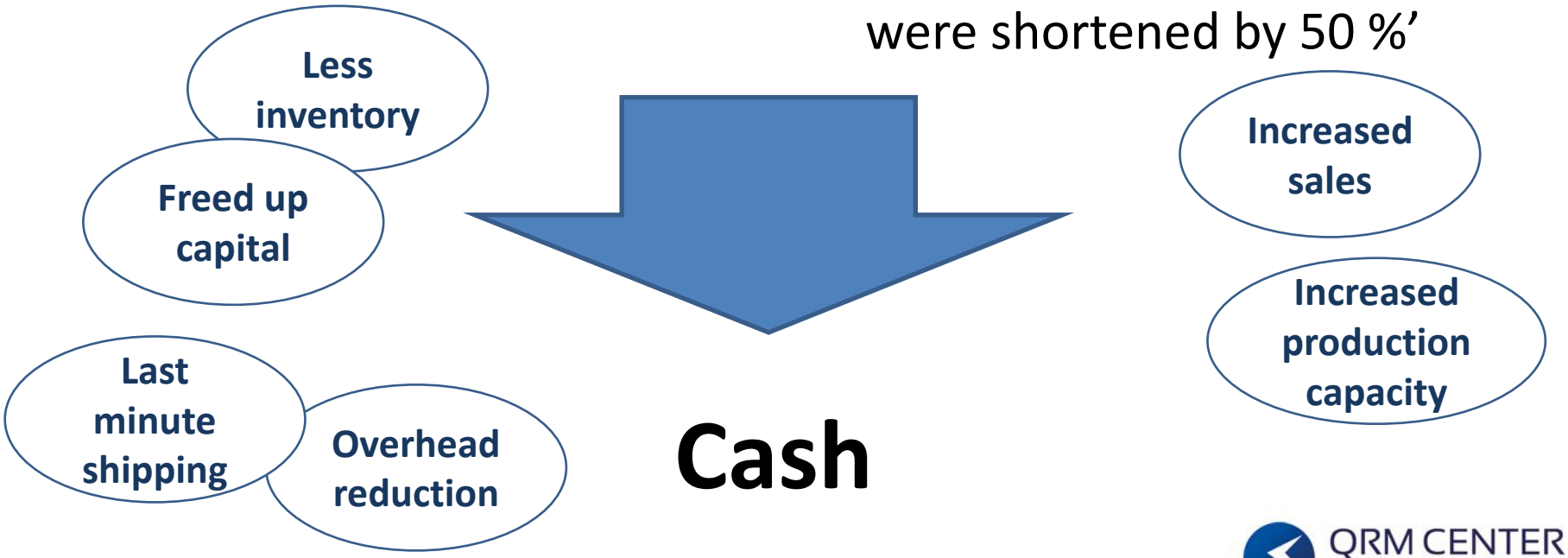
Starting from business drivers focus on

COST DRIVERS
'what reduced leadtimes might bring in terms of cost reductions'

BENEFIT DRIVERS
'what would you stop doing and what would you gain if lead times were shortened by 50 %'



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Twice the business case

From high over on the basis of a rule of thumb: the‘rule of 6’

From the bottom up: building the case on the basis of individual items

Jointly: a robust range for estimating the benefits

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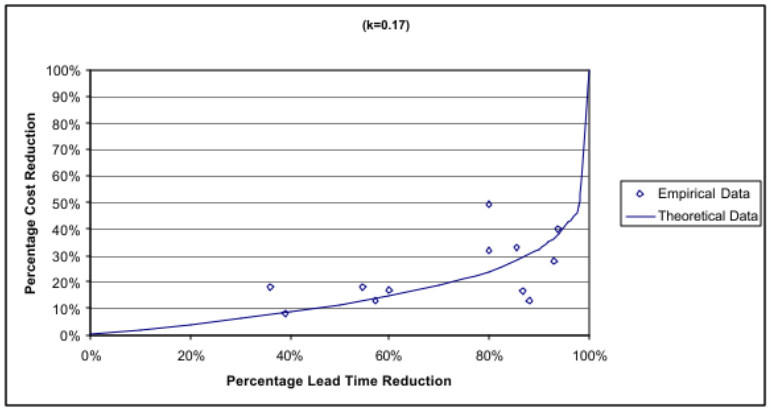
The rule of 6

Data from earlier projects have been collected that show the reductions achieved in lead times and the savings realized. Those data serve as the basis for the rule of 6.

The rule of 6 is as follows: the ratio between the costs before and after the improvement is the ratio between the lead times to the power of 0.17 (approximating the inverse of 6).

The business case approaches the benefits in 2 ways: from the rule of 6 and from an estimate of the separate elements.

$$\left(\frac{Kosten_{na}}{Kosten_{voor}}\right) = \left(\frac{LeadTime_{na}}{LeadTime_{voor}}\right)^{0,17}$$



Source: Tubino & Suri, 2000

Figure 8: Impact of LT Reduction on Overall Product Costs (Theoretical and empirical data)

Doorlooptijd huidig	20		Kosten huidig	20.000.000	Besparing volgens power of 6		
Doorlooptijd doel	12	40%	Kosten na	18.336.469	1.663.531	8%	

See next sheets

Doorlooptijd huidig	20		Kosten huidig	20.000.000	Besparing volgens power of 6
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BATEN
1 **VOORRAAD**
1.1 Waarde voorraad
1.2 Kosten van voorraad
inclusief rente, opslag,…
1.3 Vrij kapitaal
1.4 *Ondernemingswaarde van vrijkapitaa*
2 **OMZET**
2.1 Gemiste orders vanwege tijd €
2.2 Marktomvang??
2.3 Marktaandeel??
OMZET PER FTE
3 **PRODUCTIVITEIT**
3.1 Aantal betrokken directe FTEs
3.2 Loonkosten productie
4 **NETTO CAPACITEIT**
4.1 Aantal navragen (per jaar)
4.2 Tijd per navraag (uren)
4.3 Aantal*tijd*tarief
4.4 (Her)Planning & werktoewijzing
4.5 Vergaderingen
4.6 Overhead (fte)
Margin!!
Totaal besparingen

Inventory
The inventories drop. The decrease itself is not a benefit. However, the costs of inventories (storage, capital, obsolescence, etcetera) may be included as benefits

Turnover
Orders that you miss because your quote is late and that you would have won in the new situation

Productivity
The time that the workforce works is more productive because the quality is higher

Net capacity
Greater availability of the workforce for net production if lead times are reduced, as less time is spent on handling products <and?> material

INVESTERING
5 PERSONEEL
5.1 Uurtarief
5.2 Activiteiten
5.3 Introductie
5.4 …
5.5 Kaizen
5.6 SMED
6 OUT OF POCKET
6.1 Item a
6.2
6.3
Totaal

Workforce
Carrying out projects requires time from the workforce

Out-of-pocket expenses
Implementing certain changes in the process requires out-of-pocket expenditure (e.g. extra tools, costs of setting up a cell, modifications to tools and machinery)

Cashflow (per jaar)	0	1	2	3	4	5
Baten/Investering (-)	€ -716.460	€ 594.000	€ 594.000	€ 594.000	€ 594.000	€ 594.000
Discountfactor	0,05					
Payback periode (in jaren)	**2,2**					
NCW	**€ 1.766.904**					

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Doorlooptijd huidig	20		Kosten huidig	20.000.000
Doorlooptijd doel	12	40%	Kosten na	18.336.469

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Totaal

Cashflow (per jaar)	0	1	
Baten/Investering (-)	€ -716.460	€ 594.000	€ 5
Discountfactor		0,95	

20		Kosten huidig	20.000.000	Besparing volgens power of 6	
12	40%	Kosten na	18.336.469	1.663.531	8%

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A3 with PDCA for business case

Title: • QRM Business Cas … o QRM • 1. 2

Owner: • Vincent Wie … Business Case

Introduction / summary:

QRM focuses on lead time: the business case should therefore focus on the benefits of shortening lead times. For example, shortening lead times leads to less storage, smaller inventories, fewer status inquiries by customers, more turnover.

Time: *16 hours for the motivator + time for FTMS & MCT*

Roles: *Sponsor, domain experts (staff from finance, logistics, sales, production, <selling staff>), QRM expert*

PLAN

Do not look for a problem that matches QRM: look for a solution to your problem.

Describe background & the need for improvement

Identify business drivers such as

- Current trends – *sales/turnover/external market developments*
- Customer preferences
- Product mix – *e.g. customers-products-volumes*
- Market share - *per product or product group*
- Target values for financial indicators

If the market share cannot be determined within 30 minutes, this step may be skipped

Identify problem areas e.g.

- Poor score for price quotes
- Customer complaints – e.g. concerning delivery times/reliability of delivery

Compare competitors' performance

Identify the principal stakeholders for this initiative – focus on their interests

Allow time for Focused Target Market Segment (FTMS) and Manufacturing Critical-path Time (MCT) – see other modules for more information

Stakeholder matrix, Checklist for contraindications, Baseline questions 1.7-1.12

DO

1. Define target market segments
2. Measure the current situation in terms of the business drivers target market segment and financial indicators
3. Define an FTMS and select the principal segments
4. Prepare MCT maps for the principal segments
5. Estimate the potential for improvement
6. Identify the steps required/QRM modules to be used
7. Map out the costs of the initiative for improvement – order ve
8. Preliminary meeting with key personnel, make necessary cha
9. Calculate the Net Discounted Value and the payback period
10. Present the business case to the stakeholders

Examples include the value of inventories, the value of the m2, the number of orders lost, the number of FTEs for customer inquiries.

Ask participants in the BC, "What would you stop doing if lead times were no longer than X?" Use this input for the calculation for the business case.

FTMS – MCT PDCA sheets; QRM Business Case sheet; Consult historical data in QRM Center Knowledge Database; It's about time, Chapters 1 and 5

ACT/ADJUST

What	Who	When	Status
Alter the business case	Motivator for the initiative		
Speak with individual stakeholders	Sponsor		
Go/No-Go decision	Sponsor, Directors		
Plan the next step in the project	Motivator for the initiative		
Information across the width of the workforce	Sponsor		

CHECK

Is the result of the Business Case calculation sufficient?

- Payback < 3 years, Net Discounted Value (see elsewhere in this module) is positive

How did the stakeholders receive the business case presentation?

The return on investment may also be calculated. It is not used as a standard here, as it is more complex and not necessarily more accurate.

Review the first 3 years in particular– costs and benefits are somewhat speculative after 3 years,

WRAPPING UP

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The case for speed

Is not self-evident

Stronger with a cash focus

Requires hands-on observation of current practice

Deeper strategic thinking

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For more information please visit

www.qrm-centrum.nl

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The European QRM Center thanks its founding fathers and partners!