

A world map with a blue color scheme, showing continents and oceans. The map is centered on Europe and Africa.

European QRM Centrum

Competing on time – world wide

Business Case Workshop

www.qrm-centrum.nl

Spare capacity

We invest money
in warehouses,
not in extra
machines

Direct labor does
purchasing, 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 reflections on the
case for speed**

What we'll be doing in this workshop

Why is speed important to you?

Traditional accounting versus QRM

Building the business case

Some illustrations

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



Purpose and scope European QRM Center

Develop 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

The screenshot shows the website 'logistiek.nl' with the tagline 'Nieuws, kennis en carrière'. The date is 'Zaterdag 5 mei 2012'. The navigation menu includes 'Home', 'Supply Chain', and 'Productie'. Below the menu, there are links for 'Nieuws', 'Experts / Blogs', 'Vacatures', and 'Opleidingen'. The main content area features a 'Dossier - Verbetermethoden in productie en' section with a list of articles: 'Wat bepaalt de keuze van schedulers en planners?', 'Moeite met Lean? QRM biedt wellicht uitkomst', 'Seriegroottes: EPEI of toch EOQ?', and 'Risk management onontbeerlijk in procesindustrie'. The article 'Moeite met Lean? QRM biedt wellicht uitkomst' is highlighted, with the author 'Hans Heinrich Glockner' and the date 'Geplaatst: 6 mrt 2012'.

The banner features a world map background with the text 'FAST. AGILE. COMPETITIVE. Time is on our side' and 'QRM Center Europe presents: QRM 2012 Conference'.

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

Vincent Wiegel

Economist, Philosopher

HAN Professor Lean

Director European QRM Center

“Half the time I’m wrong”



Cost & benefit drivers

Focus on cash

Translating speed to cash

BUSINESS CASE DRIVERS

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?!

Starting from business drivers focus on

COST DRIVERS

‘what reduced leadtimes might bring in terms of cost reductions’

Less inventory

Freed up capital

Last minute shipping

Overhead reduction

BENEFIT DRIVERS

‘what would you stop doing and what would you gain if lead times were shortened by 50 %’

Increased sales

Increased production capacity

Cash

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

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

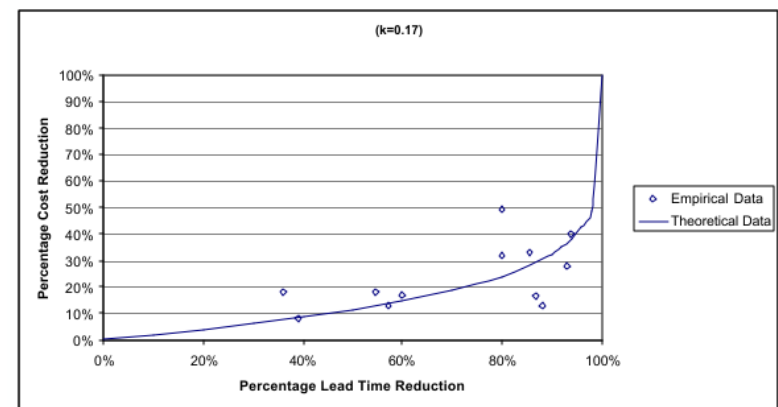


Figure 8: Impact of LT Reduction on Overall Product Costs (Theoretical and empirical data)

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%

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%

BATEN**1 VOORRAAD**

- 1.1 Waarde voorraad
- 1.2 Kosten van voorraad
inclusief rente, opslag,...
- 1.3 Vrij kapitaal
- 1.4 *Ondernemingswaarde van vrijkapitaal*

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					

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

BATEN

1 VOORRAAD

- 1.1 Waarde voorraad
- 1.2 Kosten van voorraad
inclusief rente, opslag,...
- 1.3 Vrij kapitaal
- 1.4 *Ondernemingswaarde van vrijkapitaal*

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

Cashflow (per jaar)		0	1
Baten/Investering (-)	€ -716.460	€ 594.000	€ 5
Discountfactor		0.05	

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

ries drop. The decrease
a benefit. However, the
inventories (storage, capital,
e, etcetera) may be
benefits

you miss because your
e and that you would have
new situation

at the workforce works is
ective because the quality

lability of the workforce
uction if lead times are
less time is spent on
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)

Flow (per jaar)	0	1	2	3	4	5
/Investering (-)	€ -716.460	€ 594.000	€ 594.000	€ 594.000	€ 594.000	€ 594.000

A3 with PDCA for 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 Sponsor, domain experts (staff motivator + from finance, logistics, sales, time for FTMS & production, <selling staff>), QRM expert
 Roles: MCT

PLAN

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

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

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

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 volume
8. Preliminary meeting with key personnel, make necessary changes
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

The case for speed

Is not self-evident

Stronger with a cash focus

Requires hands-on observation of current practice

Deeper strategic thinking

For more information please visit

www.qrm-centrum.nl

The European QRM Center thanks its founding fathers and partners!

