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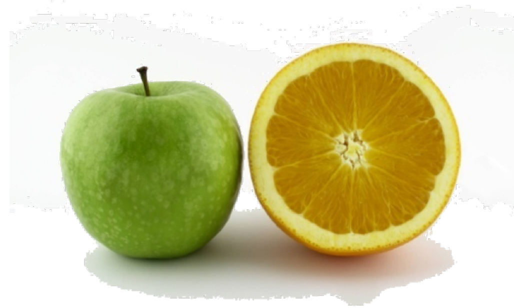

# Pre-reading Material

# Apples & Oranges

## Business Simulation

**Dear Value Participants**

We are pleased to have you joining our business simulation session, APPLES & ORANGES, Business Simulation which is aimed to facilitate you in developing your business mindset and for you to have business finance insight.

We believe you will find the business simulation challenging, intriguing, rewarding one as well as it is FUN which gives you a lot of experience in managing business in a safe environment. Then we expect upon completing this program, you will bring a rich learning experience to be exercised and applied in your organization

Prior to the business simulation journey, we provide you some reading material for you to start getting some ideas what you will be going through. Please read the material.

We look forward to seeing you.

Kind regards,

**Facilitators Team**

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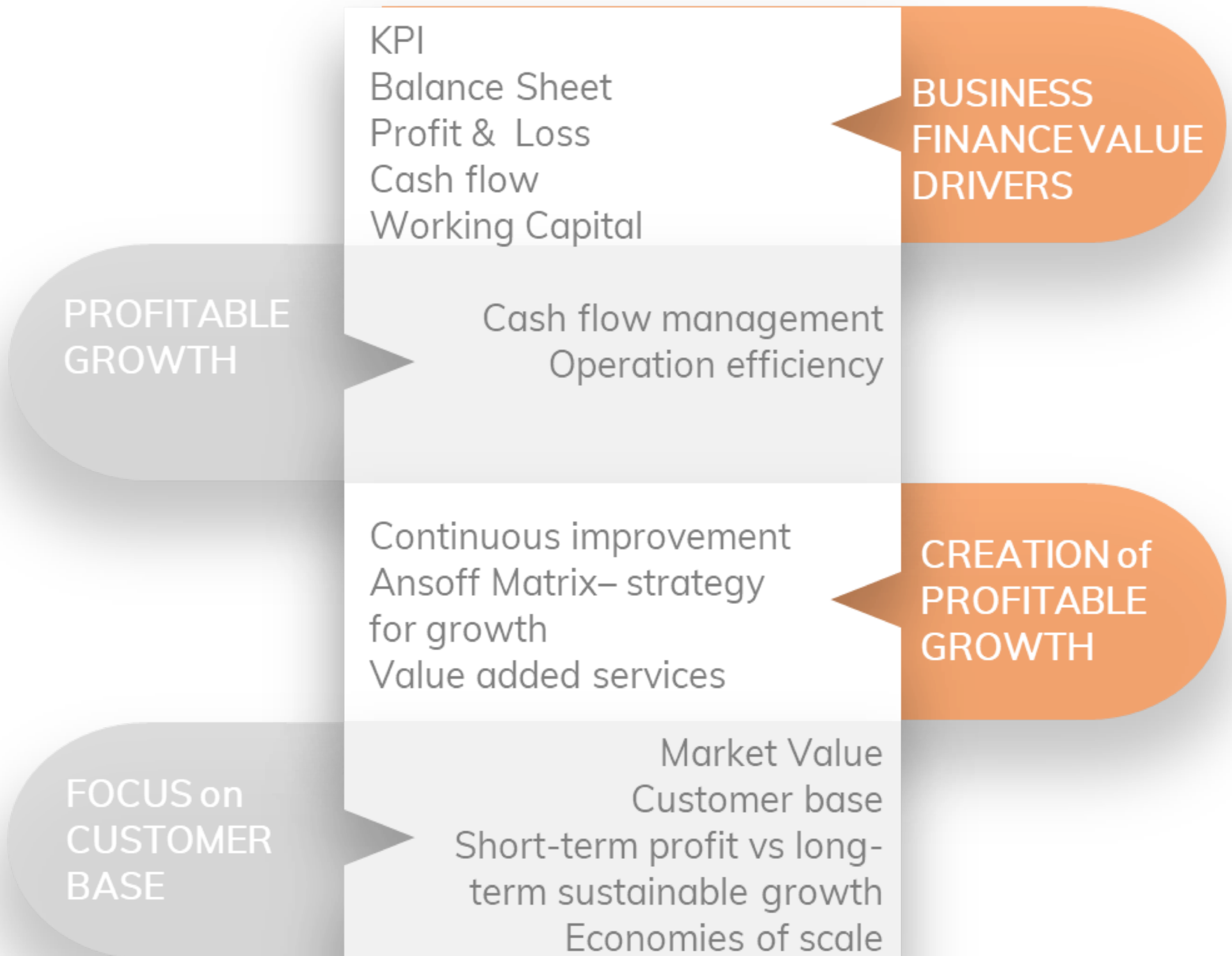
# Apples & Oranges : Key Concepts Covered



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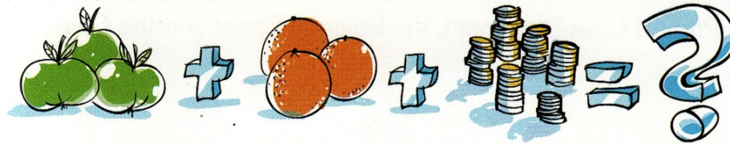
## Apples & Oranges?

It is said that one cannot compare apples and oranges, meaning things that are Intrinsically different, in different forms – such as apples and oranges and cash.



But that is, as you will lern, exactly what accountants are supposed to do

# The big picture

## It's all about adding value

You buy material or expertise, you add value in several steps by doing something with it and you deliver the finished product to the customer: It is a chain of activities, and in each step you add value of some sort; this is a **Value Chain.**

Every industry and every business has its own, more or less complex. Value chain. The **Value** of the finished product is essentially determined by the customers – by now mush they are willing to pay for it (22m in the example at the right).

The **Cost** of making the product or service is the sum total of what you had to pay in each step of the Value chain (18m in the example). This is the value of the product or service seen from an accountant's point of view. In accounting terms, it is called the **Book Value.**
And this, as you will see, is the foundation of Business Finances and Reporting.

***The goal of any business is to create more value than the total amount spent for making the finished product – the Book value.***

## A single way to measure value

Many years ago, at different times in different place, the old way of trading bread for milk or fixing a roof for half of a wild boar became impractical. The need for a way of identifying value in order to exchange it freely gave rise to the concept of a common way of measuring value, a yardstick: **Money.**

Over time, “money” has taken on many shapes and forms: shells, pearls, copper, gold, salt (hence the word “salary” !), coins, et cetera. Today money is largely ones and zeros crisscrossing cyberspace.

Having a single way to measure and represent all different types of values involved in the value chain (i.e., numerals with a currency symbol) allows us to compare things that are as different apples and oranges. Making such comparisons is a requirement for tracking a business’s finances. ***Money makes the world go’round …***

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# Value Chain

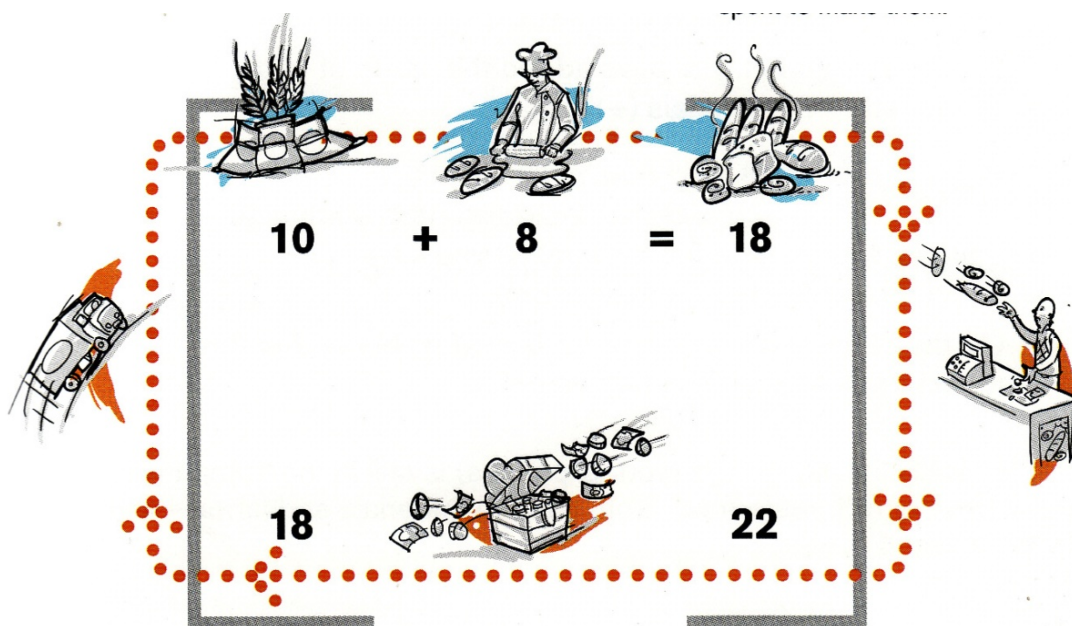
A very simple example, just to make the point:

*You purchase raw materials such as wheat, sugar, yeast, water → You make the dough → leave it to ferment → and put it in an oven to let it bake → the finished bread is stored → then packaged → and finally delivered to the customer.*

In each step value is added; and in each step you need to spend some money for material and labor- thereby increasing the Book value.

**Rule #1**

**The cost of your goods and services sold equals what you spent to make them**




**Rule #3**

**The idea is to have more money coming in than going out**

**Rule #2**

**if the customer is willing to pay more, you are in business**

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## Case 1: Manufacturing — focus on EBIT

# “ We decided to go for the low-hanging fruit…”

A manager explains:

We were not happy with the predicted profit for the past year and made a decision to look for short term, easy-to-grab opportunities — regardless of their size. We scheduled a series of brainstorming workshops, most of them with people from different functions, to get fresh ideas ….

## Brainstorming on the factory floor

It turned out that people had loads of ideas. When asked why they hadn’t think these ideas further a typical answers was “ I really didn’t think it would make much difference.’

The result was a **‘Let’s do it’ list** with 36 items – including ideas for reducing scrapping, simple change in assembly order, an innovative, yet simple new tool to be used in a certain process, et cetera. The list also included a dem and for one of the suppliers to secure zero error in their deliveries of components.

Put together these changes added up to a reduction of cost of goods by 4%

An interesting side effect was that workers felt more involved as a result of this initiatives. This, in turn led to a greater responsibility being taken ... which led to fewer errors ... which led to higher Customer satisfaction ... which led to an increase in Sales by 2%.

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**Case 1: Manufacturing — focus on EBIT**

## Offer added value instead of discounts

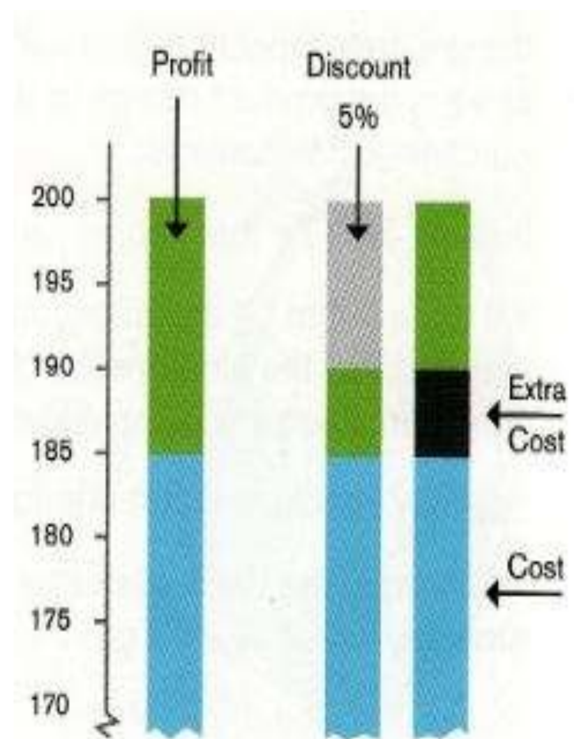
Our market has become more and more price sensitive and it has been increasingly tempting for the sales people to offer discounts as a means of securing the order.

Not all of the sales people fully realized how discounts affect profit ... Not until a recently hired sales person provided this demonstration:

*“what if instead of a discount we offer more value extra services of some kind) with a similar value for the customer ... but at a lower cost for us.*

*For example: A 50/s discount means that we lose two thirds of the planned profit as shown here.*

*By instead offering the equivalent worth of value added we would only lose one third of the planned pro fit due to the extra cost of the added services By applying this idea to a selection of our key accounts the result was that the average price level went up 2%.*



# All in all

We also needed some extra marketing efforts and some more help from the support functions. But it paid off as you can see, the EBIT almost doubled!
Nottoo bad!

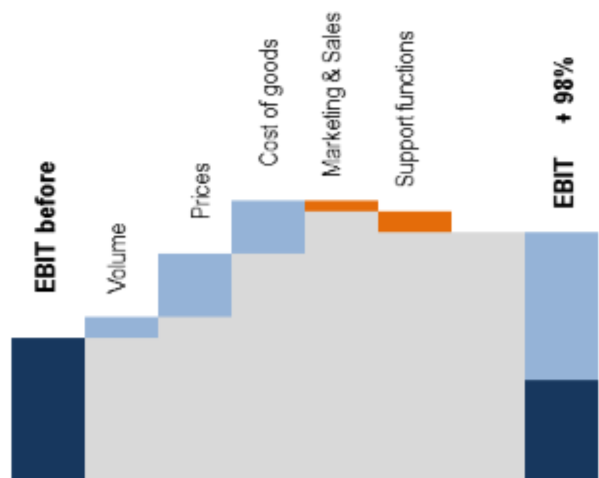
## What we achieved

| | |
|---|---|
| Sales ( Volume ) | + 2% |
| Prices | + 2% |
| Cost of good sold | - 4% |
| Marketing & Sales | + 2% |
| Support function | + 1% |

### Profit & Loss Statement

| | | Before | After |
|---|---|---|---|
| **Sales** | | **1000** | **1040** |
| Cost of goods sold | | 600 | 588 |
| **Gross profit** | **400** | **452** | |
| Marketing & sales | | 110 | 112 |
| Support functions | | 180 | 182 |
| Other | | 60 | 60 |
| **Total common costs** | | **350** | **354** |
| **EBIT** | | **50** | **98** |

## Effect on EBIT




**How to read the graph**

- *Far left* : EBIT before changes
- *Light blue* : Increase in EBIT, item by item
- *Red* : Decrease in EBIT, item by item
- *Far right* : The total effect on EBIT

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# Case 2: Manufacturing — focus on Cash Flow

## “When good habits have become bad habits…”

The CEO explains:

“ To us, cash is king. So at one point, we asked ourselves: What would it take to double the Cash Flow?

As we also strived to improve on profitability, we knew that this in itself would improve Cash Flow - which we actually did by reducing the Cost of goods by 2%. The approach was mainly to ask people in Production to ask themselves, ‘Why do we still do things like this; is there a better way?’

**But there was more to do :**

We examined the inventory level – as we had done several times before – and to start with, we actually did not find any room for improvement worth doing for. Until one day when our purchasing Manager happened to see a pile of material close to one of our machines. She asked the first line manager, ‘Will you use all of this today?’ and the response was, ‘No, not today, but next week. But I do not want to risk not having it here when I need it’.

As it turned out, most of the first line managers did the same thing. It had been a long time habit to order material from stock way in advance of when it was actually needed. The reason? In previous times it often happened that production stopped due to delivery delays. That program had been solved years before, but obviously the habit did not change.

A crash course in cashflow and cost of capital for the first line managers was all that was needed.

**And as a result, the inventory level could be reduced by 5%**

Then we asked ourselves, are there more habits prevailing from the time they were good habits?.

And there were :
In the old days, we did dare to ask important customers to pay their invoices on time – ‘they might be upset’ was the thought. We also had (have to offer more generous credit term than the customers asked for. On overage, the customers pay within 55 days after sales are made. By getting them to pay only 4 days sooner, we were able to reduce Account Receivable by 7%
To encourage this new habit, we played the song ‘what a Difference Day Makes’ daily in the cafetaria.

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# Changing bad habits

Another bad habit that we were able to change was to accept the suppliers payment terms without really negotiating them. Only a few days longer payment term resulted in an increase accounts payable by 4%

**All in all**

**As you can see, changing habits could double Cash Flow!**

## What we achieved

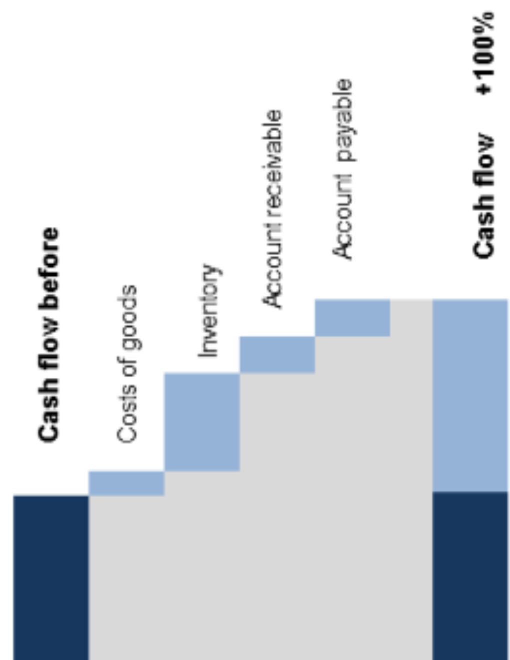
| | |
|---|---|
| Cost of good sold | - 2% |
| Inventory | - 5% |
| Account receivable | - 7% |
| Account payable | + 4% |

### Profit & Loss Statement

| | Before | After |
|---|---|---|
| **Gross Profit** | | |
| Sales | **1000** | **1040** |
| Cost of goods sold | 600 | 588 |
| All other expenses* | 350 | 350 |
| **Incoming cash, net** | **+50** | **+62** |
| **Change in ...** | | |
| Inventory (-) | | +20 |
| Account receivable (-) | | +12 |
| Account receivable (+) | | +6 |
| **Total Cash Flow...** | **+50** | **+100** |

... from operation, before payment of taxes

## Effect on Cash Flow



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## Case 3: Professional services

### “A lost hour is gone forever….”

One of the co-founders explains:

It is common knowledge in our industry that ‘ al lost hour in gone forever. The same is true for airlines, cinemas, restaurants – your name it. An empty chair is a lost opportunity to earn money, but you will have to pay the cost for it.

Fortunately, the reverse is also true : Whatever you can charge someone for occupying that empty chair will more or less fully appear on the bottom line.

**What we did – and why we did it**

As a company, we have been growing quite fast over the last years while profitability has shrunk almost at the same pace – mainly due to ‘too many lost hours’

Only 6% of the specialists’ working hours were billable last year.

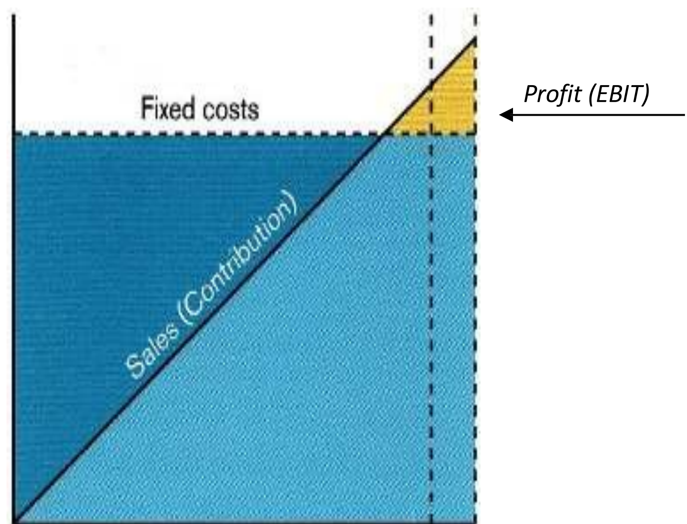
**We started ourselves ….Why?**

We knew it wasn’t a matter of laziness or lack of responsibility; we knew that a degree of over-delivery (people putting more hours that planned into a job) could explain a smaller portion of the problem, but far from all of it

*We looked at the way we are organized, how resource planning is conducted and things like that ... but still no break-through solution.*

*Then someone suggested a different way to configure the project teams, which would allow for greater flexibility.*

*It required the staff to be trained in some additional skills on top of their specialities (multi-skilling) and it required that we develop a few new tools to ads to our bag of tricks.*




*This picture shows how an increase in utilization (billable hours) from 60% to 66% affects the profit.*

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## The result was staggering :

- Less overtime was needed which reduced the cost of staff by 2%.
- As we offered a bit more value we could raise prices by an average of 2%.
- As the portion of billable hours went from 60% to 66%, we had more hours to sell without having to recruit more people or pay any other extra costs: Sales went up 7% and all of it was pure profit.

## All in all

It took some time to get there, but it was worth it, as we eventually tripled the EBIT — like for like.

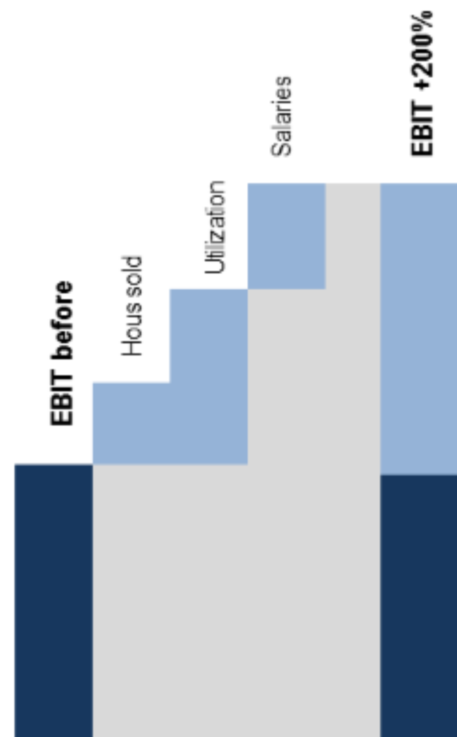
### What we achieved

| | |
|---|---|
| No. of hours sold | + 7% |
| Price per sold hour | + 2% |
| Utilization 66% (60) | + 6% |
| Salaries (prof.staff) | - 2% |

### Profit & Loss Statement

| | Before | After |
|---|---|---|
| **Sales** | **1000** | **1 0901** |
| Cost of service sold | 600 | 591 |
| **Gross profit** | **400** | **500** |
| Sales and Marketing | 100 | +20 |
| Product Development | 130 | +12 |
| Other exenses | 120 | +6 |
| **Operation Code** | **350** | **350** |
| EBIT | 500 | 150 |

### Effect on EBIT



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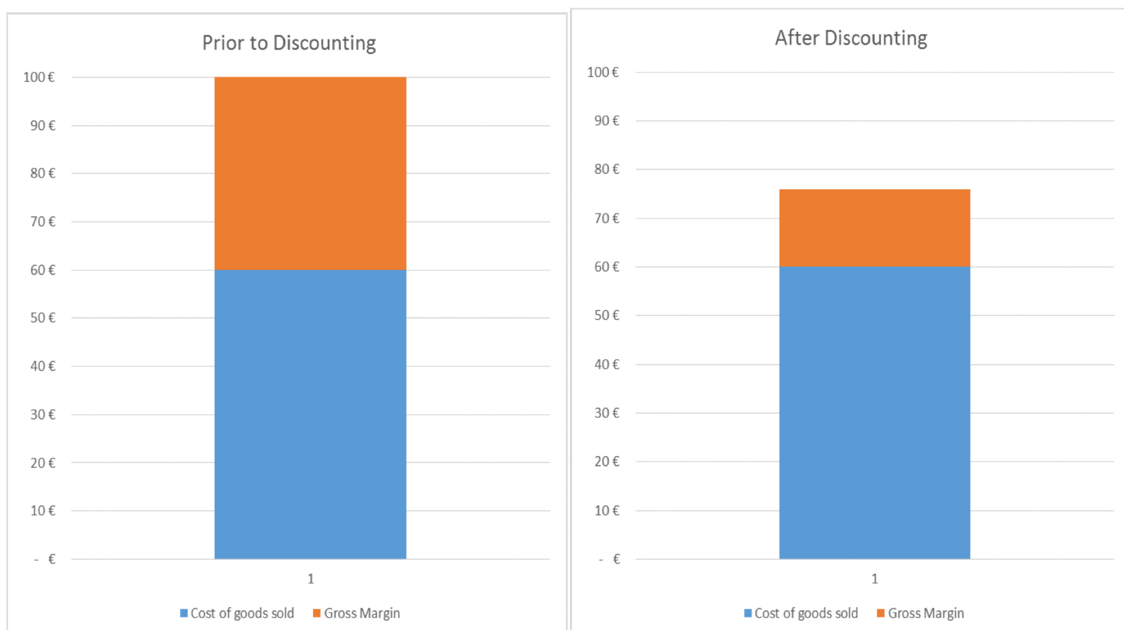
- **“Ouch! It Really Hurts”: The Erosional Power of Discounting**

- In a recent study published by Harvard Business Review* they looked at how common discounting is in the B2B industry. They found that 48% of organizations, when providing a discount, offer discounting between 10-24%. The question is, did they know how much margin they actually gave away? Let’s look at a scenario.
- If you are selling a B2B offering where you have a 60% gross margin, let’s look at what a 24% discount actually does to your profitability. Below is a diagram showing your sale and how much your gross margin is with no discounting.




- Giving a Discount is Not Always Smart.

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# What will a 24% discount do to your profitability?

When sellers and buyers talk about discounting it is most often referring to a percentage of the total sales. In this case, taking off 24% of your top-line means that your new sales price is 76 instead of a 100.

What just happened is that you gave away 60% of your Gross Margin (24 out of 40)

Now, since we have only addressed gross margin, meaning that we have deducted the direct costs associated with the production and delivery of whatever is sold, we still have to take into account common general and administrative costs. These are all the indirect costs, typically expenses like Sales & Marketing, Office Expenses, Management and R&D. The next question is, was this a profitable sale when all of the organization's cost are taken into account?

What power has your organization delegated to the sales force when it comes to discounting? Have you equipped them with the knowledge and understanding of what they give away when they are discounting the price?

In the given example, even if we take the lower end, a 10% discount, it is still giving away one quarter of the gross margin. Percentages are powerful and small changes on the total price may have a huge impact on your bottom

line. If you want to explore more on how small changes can have bottom line impact, try out this on-line profit simulator (also available as an app for ipads in the Appstore). It also allows

you to enter and play with your own organization's numbers.

*HBR Jan-Feb 2015 The Downside of discounting

Learn more about what happens when you give a discount:

Try out the Celemi Profit Simulator that we originally developed for IKEA.