Business Engineering Systems (in a Nutshell)
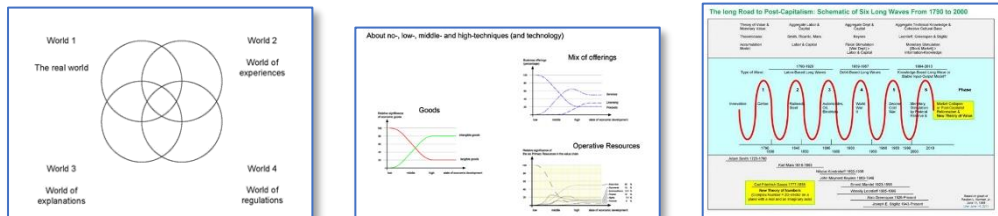
1. Worlds and Economy

1.1 Four worlds

World 1 = The real world (tangible, intangible)

World 2 = The world of experiences (intangible, subjective)

World 3 = The world of explanations (form = tangible, content = intangible)

World 4 = The world of law – legal and paralegal (Form/Text, interpretation)

If 'World 3' does not explain 'World 1' enough it (World 3) should be redesigned.

2. Innovation

Innovation -> 'Creative Destruction' -> Joseph Schumpeter 1942

2.1 Scientific Innovation (Kuhn)

Progress of scientific insights follows mostly at an iterative path. However, from time to time we face 'quantum leaps' to a new level of scientific insights following 'Crises in Reality' because explanation models are failing.

See Thomas Kuhn 'The Structure of Scientific Revolutions' 1962 – link PDF
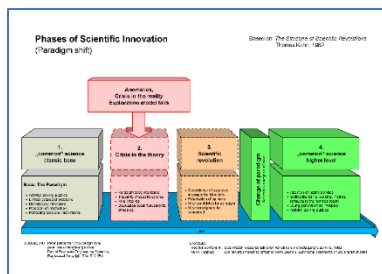
Download pdf: https://bengin.net/permalink/scientific_innovation_kuhn_e.pdf

2.2 Innovation (Techniques and Technologies)

Two dimensions of innovations. 'Loud' = Technologies (Computer, Tesla…), 'Silently' = Techniques (rules… as in accounting, organization models, business modelling…)

Change often starts with technological and the followed by organizational (technical) innovation.

Two Directions of Innovation (Technology and Techniques)
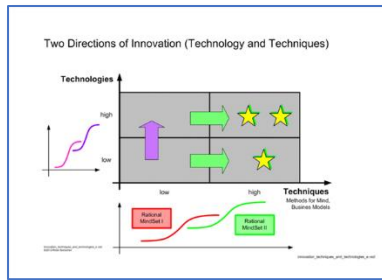
3. **Innovation in economics**
   Economics understood as a product of mind – an immaterial product.
   Its foundation was led more than two centuries ago. Start of industrialization, slavery, burning witches… At that time, one could neglect the intangible assets. Because these are absent in the fundamentals of theory and because they are important in our intelligent economy, the basics of this MindWare must be expanded.
   The integration of intangible assets and the introduction of hybrid value metrics (a combination of subjective and objective metrics) leads to unprecedented precision in the design of intelligent ecosystems.
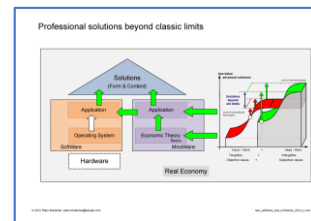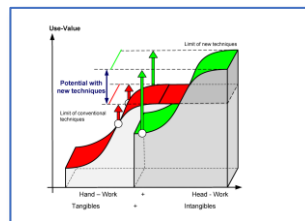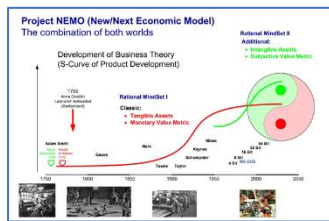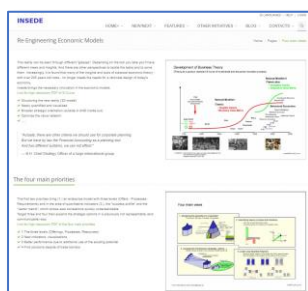

4. **Business Engineering Systems (Framework)**
   New economy needs 'new paradigms' leading to 'new maps' for a) structuring and b) quantifying the elements and its interactions. This will open new dimensions in economic reasoning and sustainable strategies.
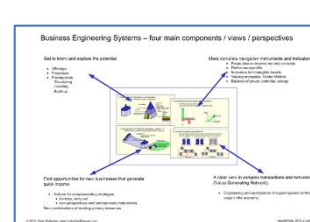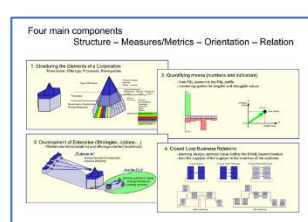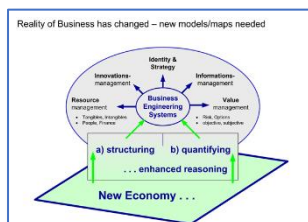

   Go to webpage, click picture:

4.1 BES-Model

In this view an enterprise has three levels.

Top = Offerings (I) Products, reproduceable, storable, changes hands… (II) Service, custom made… (III) Rights as licenses…

Middle = Processes (I) Management… (II) Operations & innovations… (III) Maintaining resources

Bottom = Primary Resources… Competence Centers… and more dimensions

Part of the six Primary Resources are the knowledge and skills of the employees as central elements of intelligent companies. The integration of these assets in the model, in conjunction with the other primary resources and the process level enables new dimensions in the strategic design of offerings. More see point 4.3
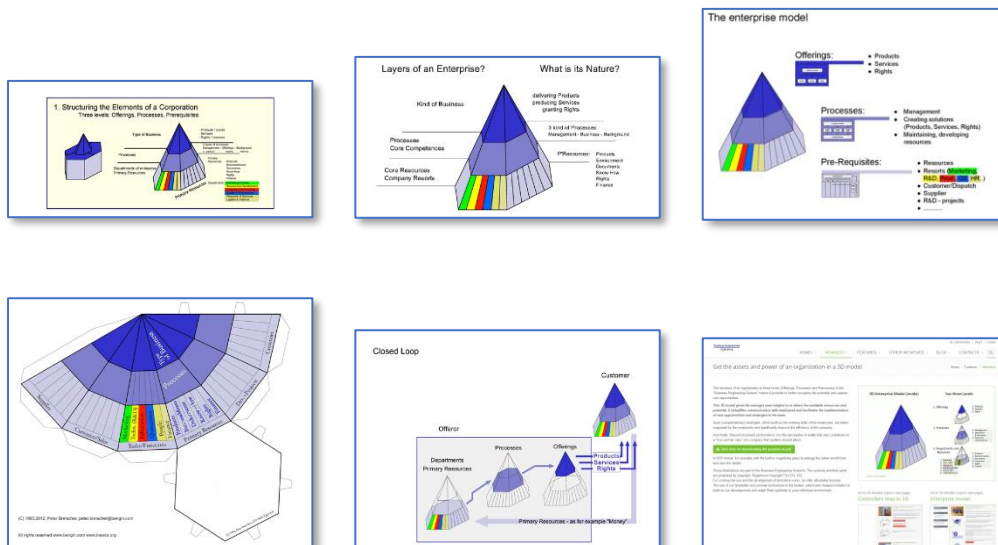

4.2 BES-Measures

Measuring is comparing with a reference standard.

There are two types of standards: 'Objective' (one has agreed on, has a 'unit' as 'inch', 'cal'…) and 'subjective' standards (Without generally valid agreement on how to measure, widely used for measuring qualitative properties.).

In order to define the properties of an object, different objective and subjective measures are determined. Also multidimensional and combined possible. For example, when determining the color (red, green, blue) or the velocity (speed and direction). In physics, multidimensional properties are visualized with vectors.
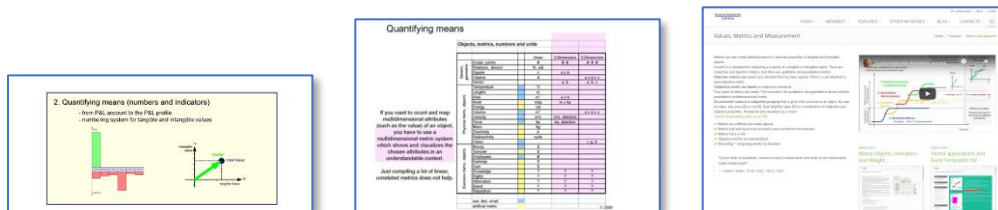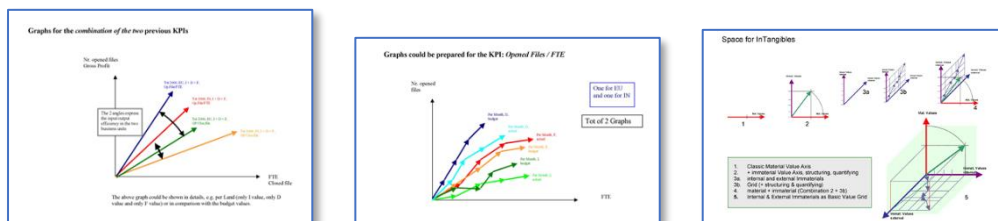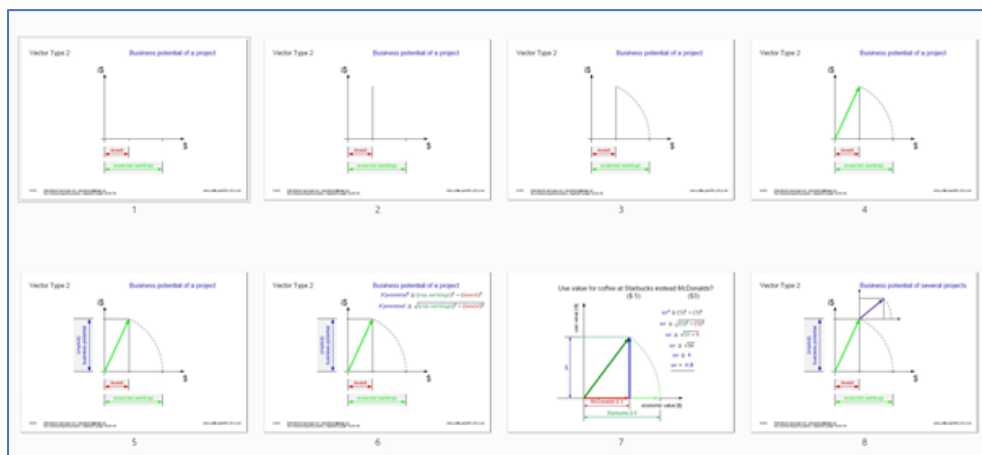

Differentiate between assets and measures:
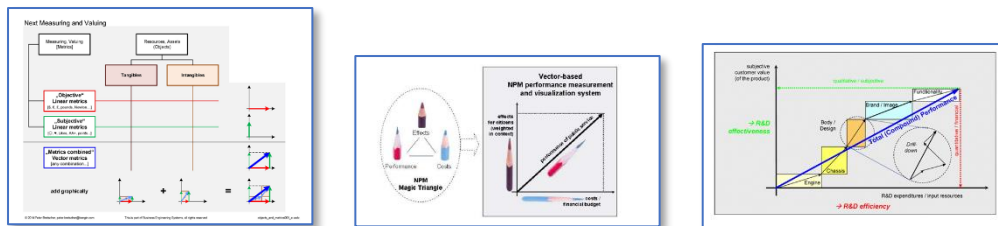
Linking several types of metrics (financial and non-financial):
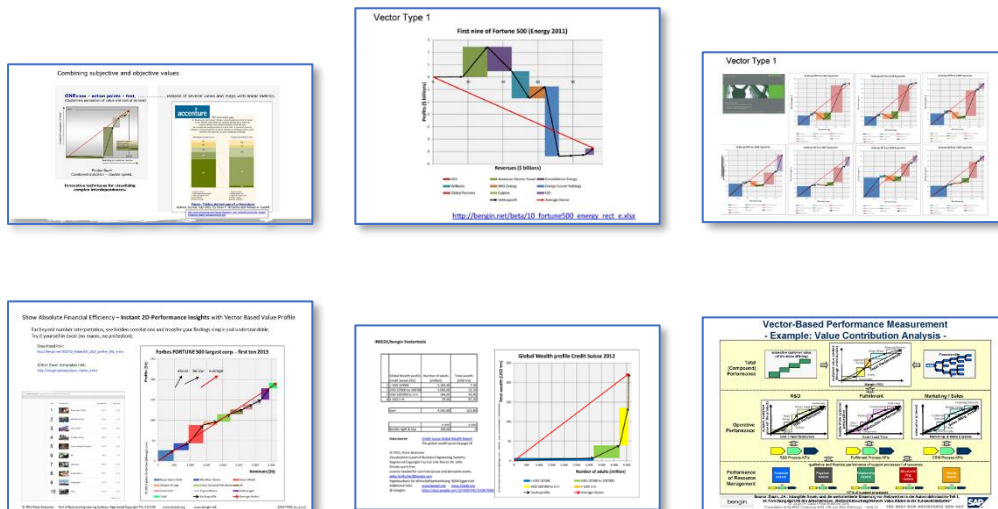
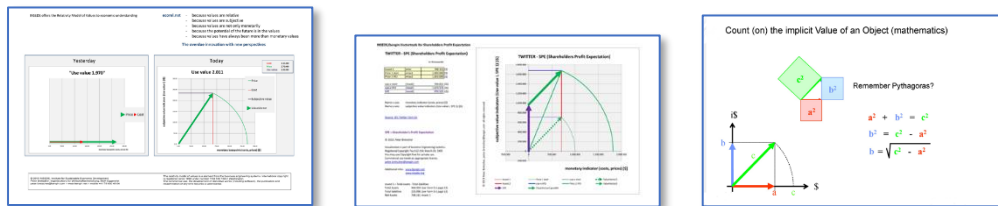Several vectors without 'rectangle'. Easier to compare several value tracks in one picture:

Linking the monetary with the nonmonetary, subjective metrics axis:

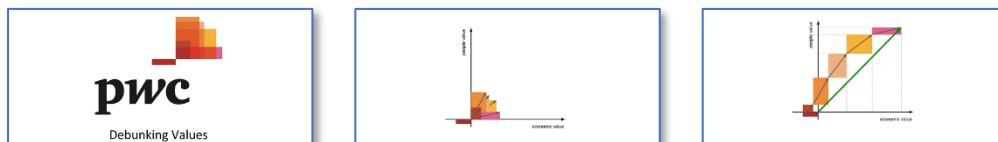Adding 2D-Values – for example 'Shareholders Profit Expectation' (SPE)

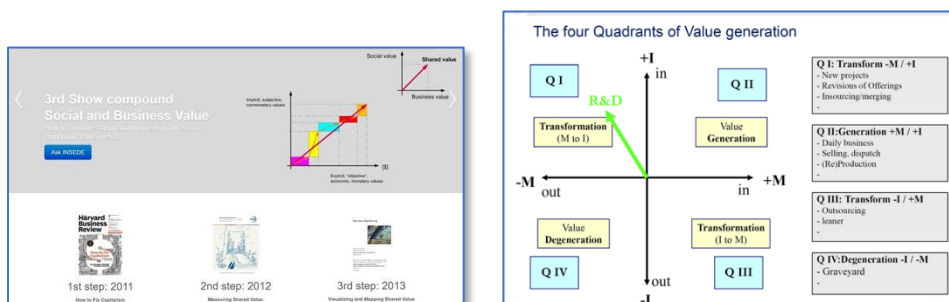Quantifying Use-Value as an intangible asset:

PwC has somehow integrated the 2D value metric in its Logo (could it be?):
See animated version in YouTube here.

Introducing 'Shared Value' (Porter, Kramer 2011) – vector profile helps to transfer the message:
Goto 'Special Website' here

4.3 BES-Orientation / Strategies

There are mainly two options to start a strategy. (i) You start with the market (needs) and then try to develop and make a better, cheaper product/service. Or you (ii) know the capabilities of your enterprise and think about what else it could be used for solving peoples' needs you could imagine.

That strategy was used by Steve Jobs – and it's still used by innovative startups.

If your assumptions were right, you will eventually create a new market.

Imagine that there are options in seven markets and 12 basic strategies:
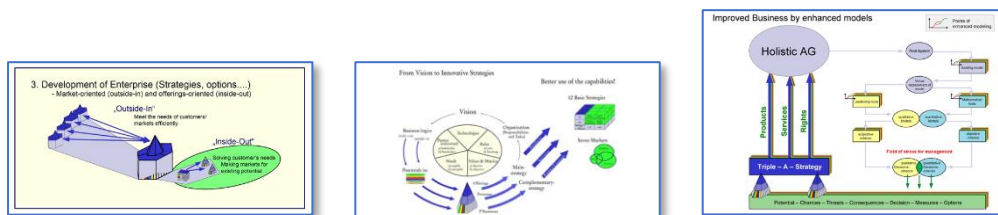
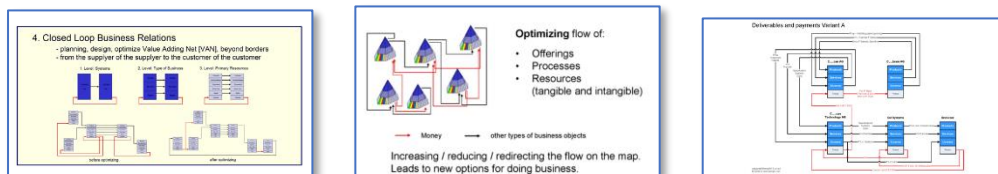## 4.4 BES-Value Net

A business relation is delivering something and getting something (mostly money, but it could be anything) back.

If you analyze the stream of tangible or intangible goods and money over several business partners you may change and optimize the flow of goods and money.

Interesting when customs borders and other trade barriers disrupt or hinder business relationship.

Value Net for iPhone (Apple), payment options:
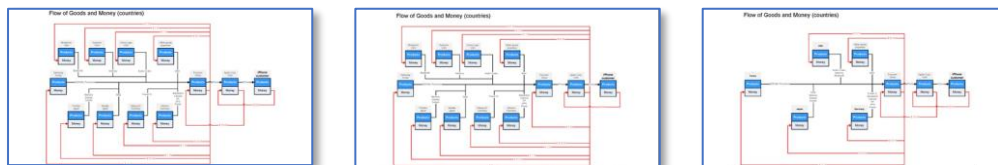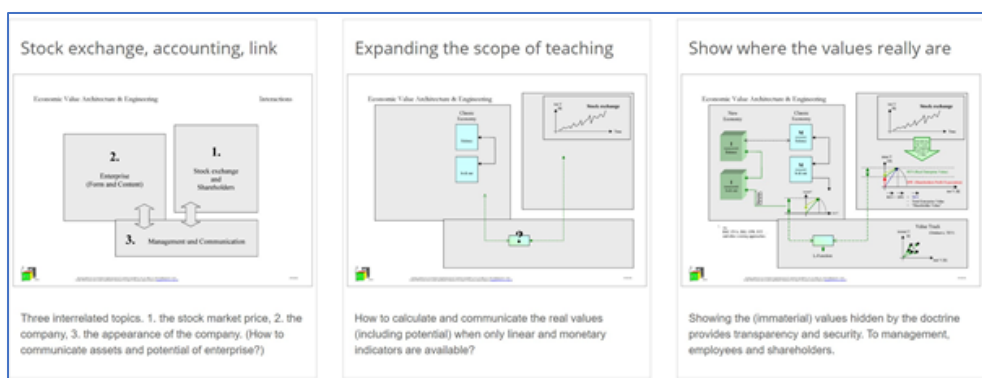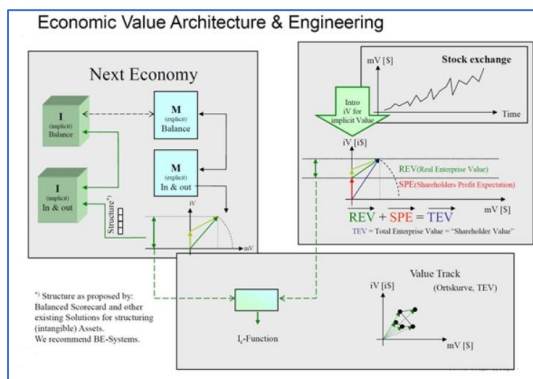

5. BES-Special (from intangible assets to stock exchange)

Pictures in this paragraph should help to localize the assets of your company in order to use it better and communicate its value in a more integral manner:

See at https://bengin.net/bes/3lstructure_e.html

5.1 Stock exchange, enterprise, communication:

Stock exchange, accounting, link

Three interrelated topics. 1. the stock market price, 2. the company, 3. the appearance of the company. (How to communicate assets and potential of enterprise?)

Expanding the scope of teaching

How to calculate and communicate the real values (including potential) when only linear and monetary indicators are available?

Show where the values really are

Showing the (immaterial) values hidden by the doctrine provides transparency and security. To management, employees and shareholders.

Economic Value Architecture & Engineering

5.2 Introducing 'imaginary economics' for intangibles:

Old Business Administration Map

Calculation, income statement and balance sheet are known. Only the intangible prerequisites necessary for productive operation are still missing.

charting what's missing

For the missing elements, mainly immaterial goods, also create an "imaginary map" of the immaterial goods.

and combine it.

The combination of the "traditional" and the "imaginary" economic maps gives the entrepreneur the necessary transparency to make better use of existing potentials.
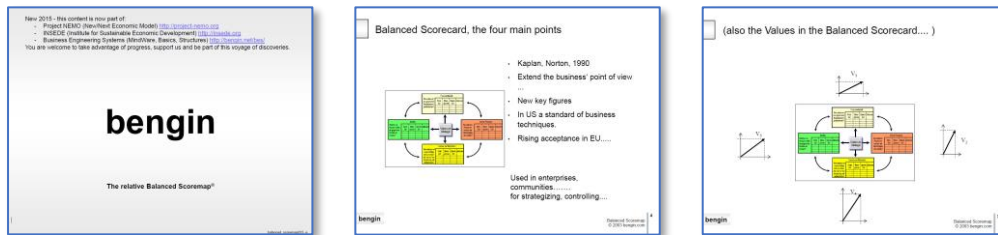

6. **Wrap-ups (others)**
List of several downloads (English and German):
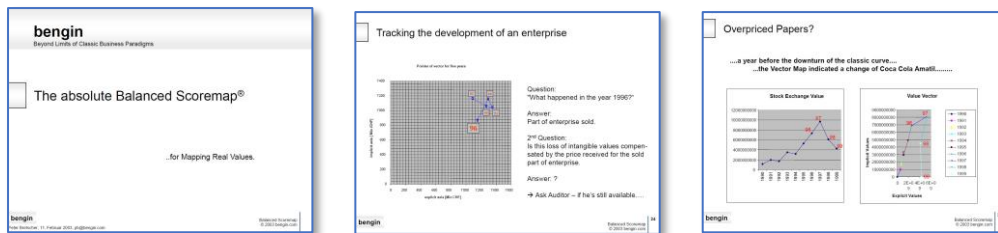(Click on image downloads as Adobe Acrobat pdf)

Balanced Scoremap – the relative (replaces scorecard):
Download as Adobe Acrobat (pdf)

Balanced Scoremap – the absolute (replaces scorecard):
Download as Adobe Acrobat (pdf)

3D Models, do it yourself… click picture to go to webpage:

Ask for more 😊

V: alpha 1
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