

**Material Flow Analysis
with Software STAN**

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Software for Substance Flow Analysis

STAN

Vienna University of Technology

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download: www.iwa.tuwien.ac.at

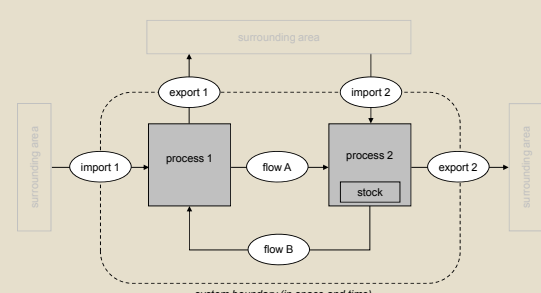
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Definition Material Flow Analysis (MFA)

Material Flow Analysis (MFA) is a tool for describing and analysing complex systems with respect to goods and substances.

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Build-up of MFA models (1)



surrounding area

import 1

process 1

export 1

flow A

process 2

stock

import 2

export 2

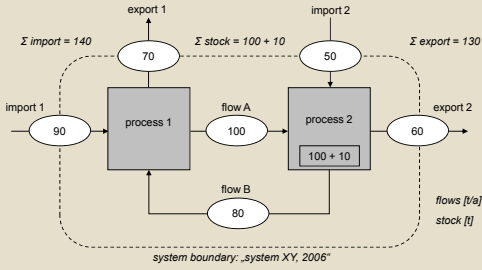
flow B

surrounding area

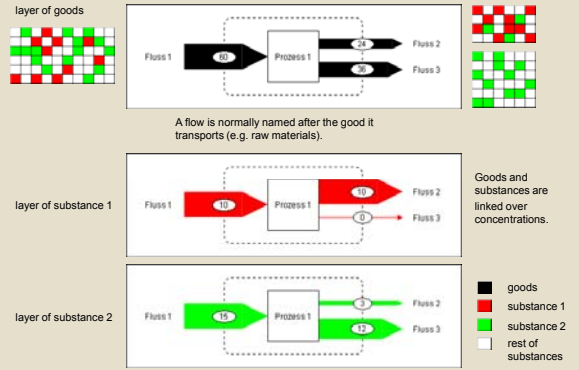
system boundary (in space and time)

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Build-up of MFA models (2)



Goods vs. Substances



C. F. Gauss (1777-1855)



mean value:

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n x_i$$

standard deviation:

$$s = \sqrt{\frac{1}{n-1} \sum_{i=1}^n (x_i - \bar{x})^2}$$

normal distribution



Comparison of Values

