



# Use and Misuse of Measures

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# Performance Indicators

Output	Performanceindicator	Explication	Unit	Measurement description		
				Measurement tool („how?“)	Measurement frequency („when?“)	Responsible („who?“)
Output 3.2 Sent Planning Documents	3.2.1 Total of sendouts	Number of planning documents sent to the recipients	pcs.	Checksheet; system based	Per PAP, monthly	Dept. 4.1
	3.2.2 Number of defective units	Number of documents that contain a defect: - formal defects as e.g. missing recipients - content related defects as e.g. missing documents	pcs.	Checksheet	Per PAP, monthly	Dept. 4.1
	3.2.3 Average cycle time	Period between the reception of the planning documents and their sentout compared to the total of sendouts	dys.	System based	Per PAP, monthly	Dept. 4.1
	3.2.4 Number of corrections	Number of process cycles (re-work) that have to be performed to eliminate defects	pcs.	Checksheet; system based	Per PAP, monthly	Dept. 4.1
	3.2.5 Average correction time	Period between the approval of a defect and its elimination compared to the number of defective units	dys./unit	System based	Every 6 months; compared to all PAP	PAA
	3.2.6 Percentage of rework related costs	Process costs for reworks including staff and other resource cost compared to the total costs	%	System based	Every 6 months; compared to all PAP	PAA



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1. Danger of reducing complex, high-dimensional relationships to a single number.
2. Efforts to satisfy this little differentiated measure.
3. To be more precise: to optimize the measured component to the disadvantage of the others.



2014

# Wenn jeder Treffer zählt

**Ermittler** Bundespolizisten machten offenbar Jagd auf Unschuldige. Das Ziel: möglichst viele Aufgriffe – um befördert zu werden.



# 2021

Vorsicht auf den Straßen im Osten Berlins

21.06.2021, 07:56 Uhr

## Neue „Abzockquote“ – Polizisten beklagen Bußgeld-Vorgabe

In Berlins Osten gibt die Polizei intern vor, wie viele Ordnungswidrigkeitenanzeigen im Straßenverkehr geschrieben werden sollen. Ein regelrechter Wettbewerb. VON [ALEXANDER FRÖHLICH](#)



Bitte rechts ran. Die Polizeidirektion 3 will härter durchgreifen. PNN / OTTMAR WINTER



1. Danger of reducing complex, high-dimensional relationships to a single number.
2. Efforts to satisfy this little differentiated measure.
3. To be more precise: to optimize the measured component to the disadvantage of the others.
4. Danger to measure the wrong things (those that can easily be measured)



A clear example is holding emergency patients in trolley in waiting areas or keeping them in ambulances outside emergency departments to avoid ‘starting the clock’ to attain the four-hour target of waiting time in Accident and Emergency (A&E) Department (Campbell 2008). An NHS report shows that 66% of A&E patients get admitted for the inpatient department in the last ten minutes of the four-hour waiting time target in fear of breaching the benchmark (NHS Digital 2009).






1. Danger of reducing complex, high-dimensional relationships to a single number.
2. Efforts to satisfy this little differentiated measure.
3. To be more precise: to optimize the measured component to the disadvantage of the others.
4. Danger to measure the wrong things (those that can easily be measured)
5. In particular: Measure the means instead of fulfilment of the goals



# User Storys

As < Role >

I want to < ... >  requirement (means)

in order to < ... >  goal



We need to build a wand → We need to detect intruders.



# Logic Models

Joseph S. Wholey (1972)

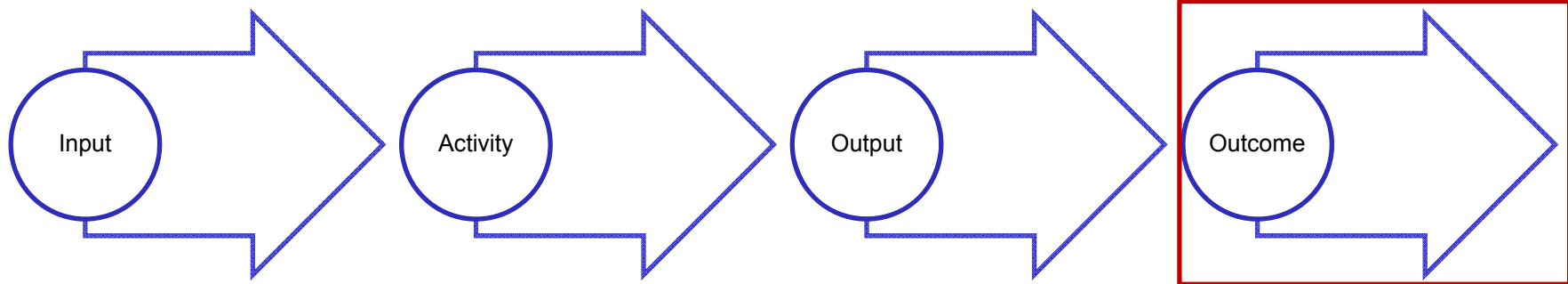


## Logic Models

- Origin: Social work
- Observations:
  - Social work is not measurable.
  - Social work is effective.
- adapted by the International Group of Controlling
- shows assumptions on effect-relationships



- Input (number of lecturers)
- Process (Does the course start on time?)
- Output (passed exams)
- Outcome (participants who got employed)
- Impact (falling unemployment)



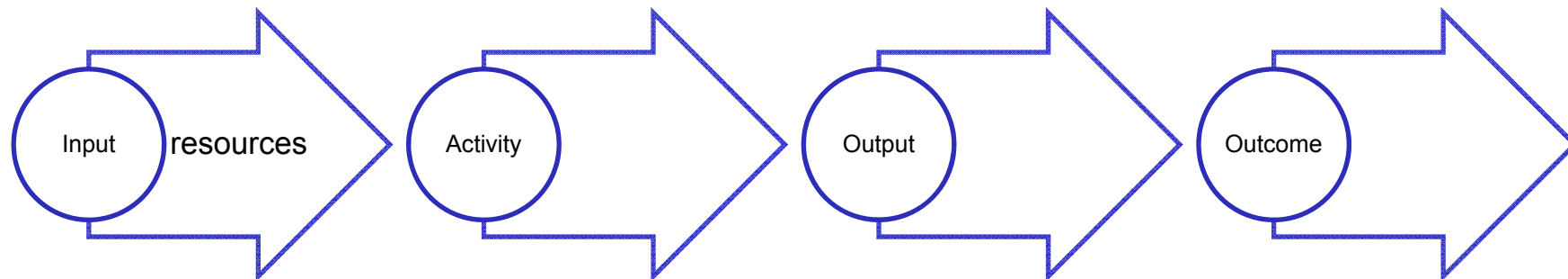
resources (time, money, people)	activities	delivered products/services	long-term (!) effect
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# "Digitalization" at Schools

## Digitalpakt: 40 von 123 Millionen Euro abgerufen

Seit einem Jahr können Schulen in Deutschland auf fünf Milliarden Euro aus dem **Digitalpakt** zugreifen, mit dem Schulen unter anderem intelligente Tafeln und Tablets bekommen und ein stabiles Netz in den Schulen aufbauen sollen.



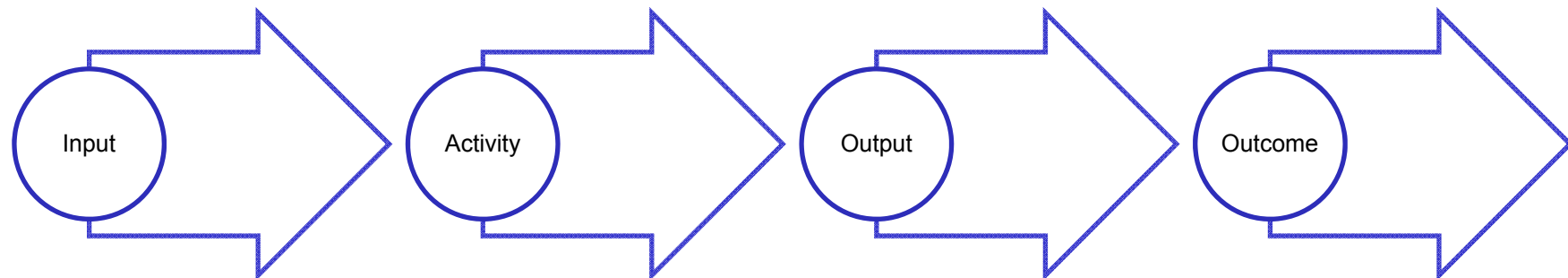
measured: 40 Mio €	?	?	Well, what are the goals anyway?
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## Example: OECD Study on Education

Im internationalen Vergleich ist der Anteil der Menschen mit Hochschulabschluss in Deutschland zwar geringer. Allerdings nehmen mehr und mehr junge Menschen ein Studium auf. Aktuell sind es fast 52 Prozent eines Altersjahrgangs,

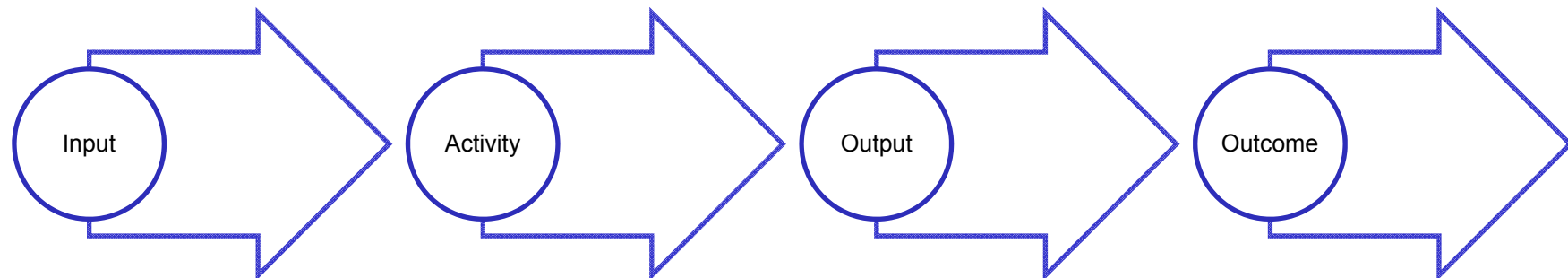


		measured: Percentage of people with university degree	and why?
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# Social Media Activities

Wie viele Reaktionen (Likes, Shares und Kommentare) löst ein Beitrag aus im Verhältnis zu seiner Reichweite (Likes + Kommentare + Shares / Reichweite x 100)?



		as above	???
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## Conclusion

- Start the discussion from the right
- to measure effectivity: Outcome or Impact
- to measure efficiency: Relationship Output /Input
- (or even better better: Outcome / Input)
- Use metrics to measure yourself.