

# WorldDAB General Assembly 2016

9<sup>th</sup> – 10<sup>th</sup> November

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# Availability affecting the total cost of ownership

## **Definition - Total cost of ownership:**

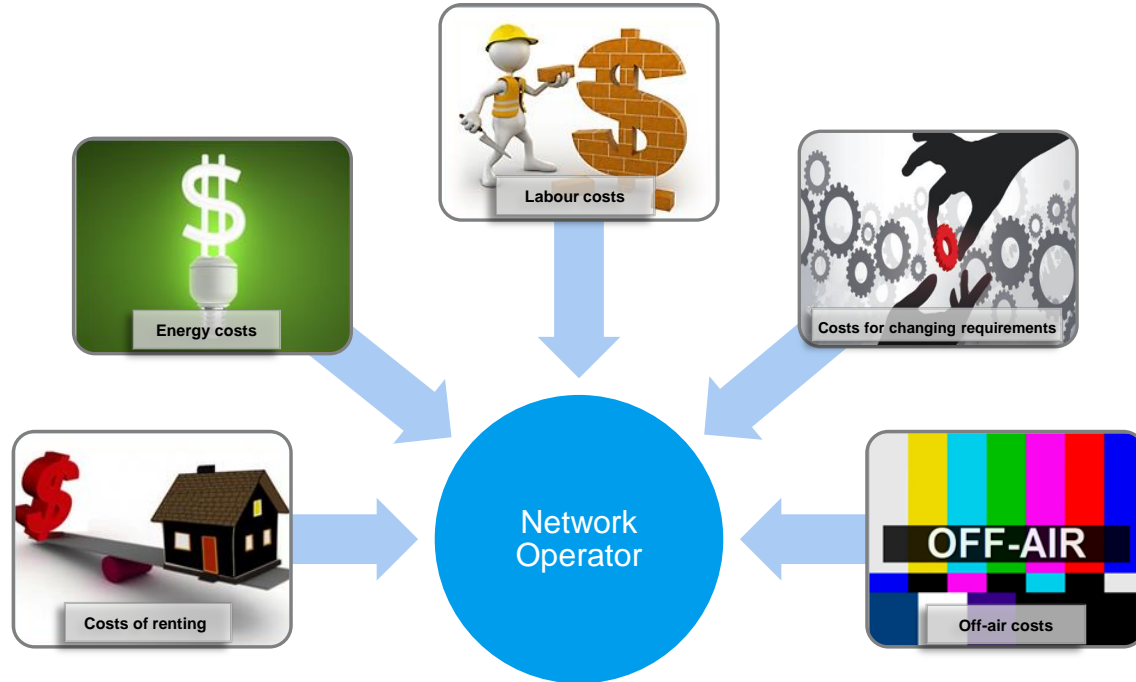
estimate of all direct and indirect costs associated with an asset or acquisition over its entire life cycle

(source: [www.businessdictionary.com](http://www.businessdictionary.com))



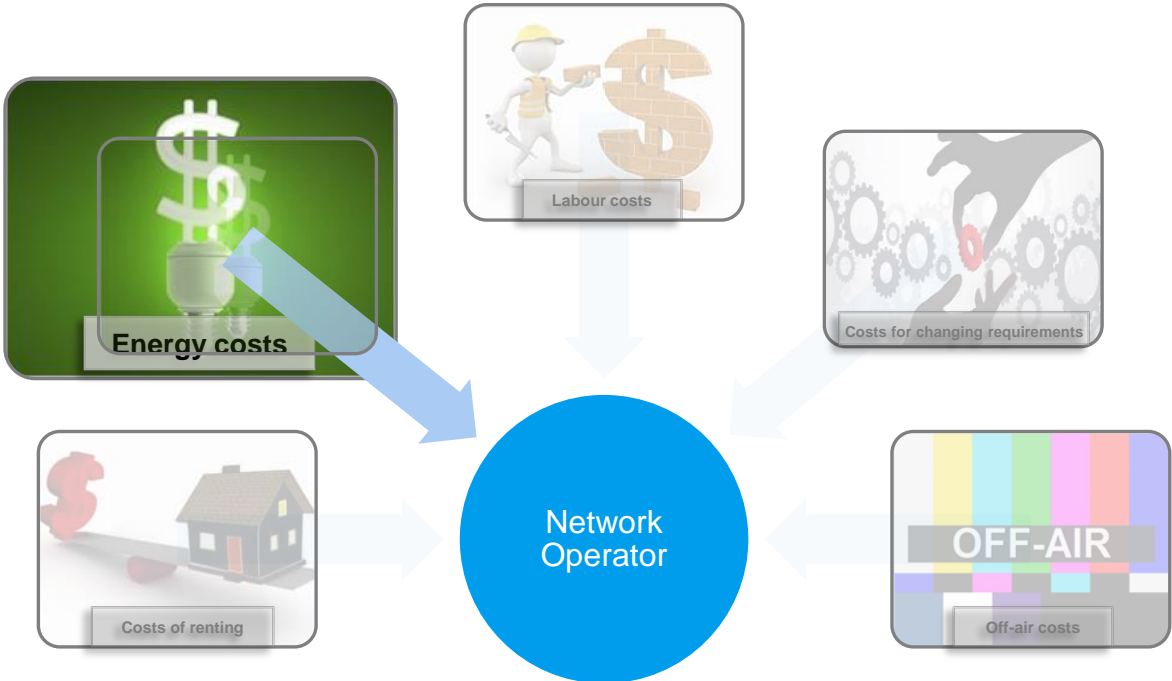
# Total cost of ownership

## Influencing factors other than investment costs



# Total cost of ownership

## Reducing energy costs



# Reducing energy costs

## Exemplary calculation



Transmitter with Doherty technology vs. Market average air-cooled transmitter		
	Average existing DAB transmitter	Transmitter with Doherty technology
$P_{out}$	2.200 W	2.200 W
$P_{in}$	8.800 W	4.480 W
Power efficiency	<b>25%</b>	<b>49%</b>
Required energy per year (24/7)	77.000 kWh	39.200 kWh
Expected energy costs per kWh	0,12 €	0,12 €
Expected energy costs per year	9.240 €	4.700 €
<b>Saved energy costs in 10 years</b>	<b>45.400 €</b>	

All values including cooling.

- **Close to 50% reduction in energy costs**
- Significant reduction of CO<sub>2</sub> emissions

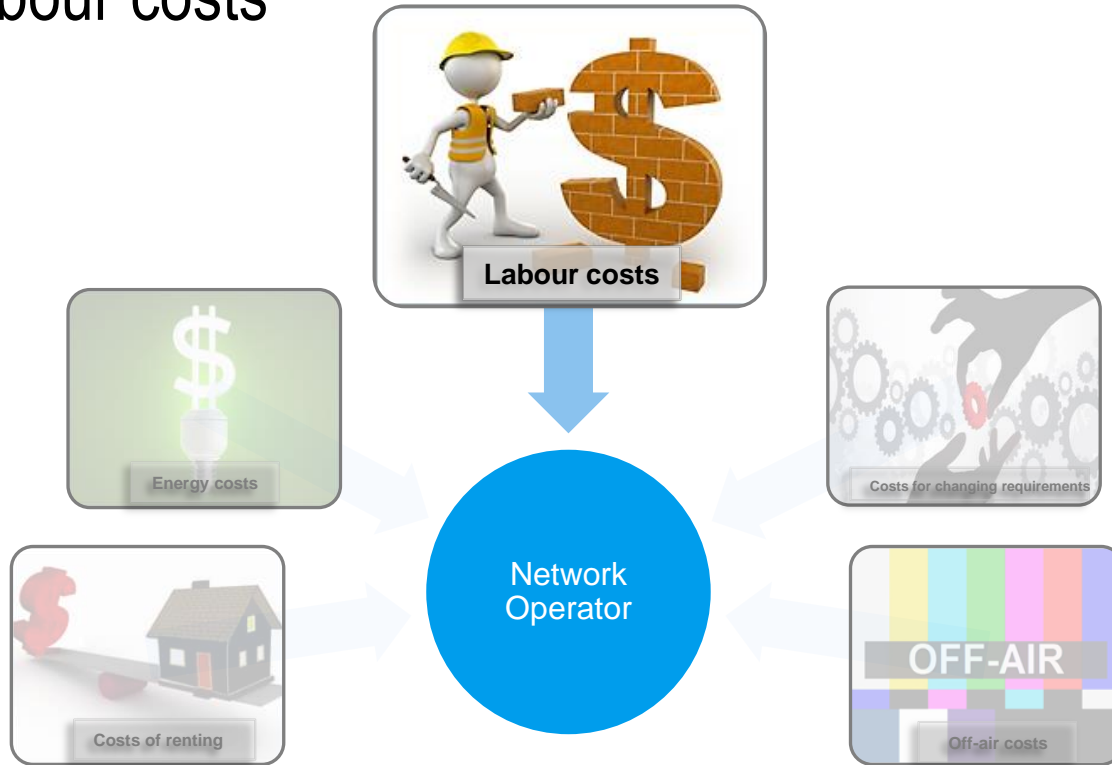


Break even for replacing inefficient old transmitters?



# Total cost of ownership

## Reducing labour costs



# Reducing labour costs

## Intelligent diagnostics from remote



Distance to Site	150km, 2 hours
Labour Cost	$70 \text{ €/h} * \begin{cases} 4 \text{ hours travel} \\ 2 \text{ hour on site} \end{cases} = 420\text{€}$
Travel Cost	$0.35 \text{ €/km} * 300 \text{ km} = 105\text{€}$
Total per Incident	525 €



# Service level agreements



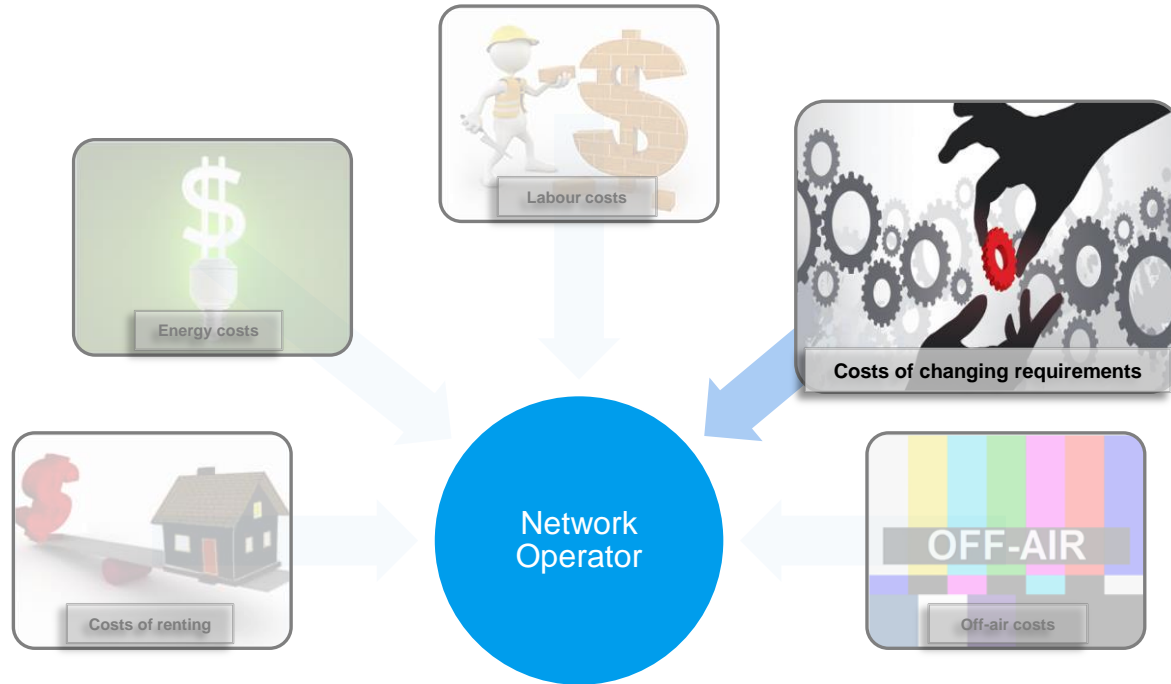
- Service Level agreements (SLA) for transmitter, headend systems and media products
- Customer tailored service packages differing in service extent, reaction and turn-around times
- 24/7 emergency technical support
- On-site support
- Proactive customer visits for regular maintenance





# Total cost of ownership

## Reducing costs for changing requirements



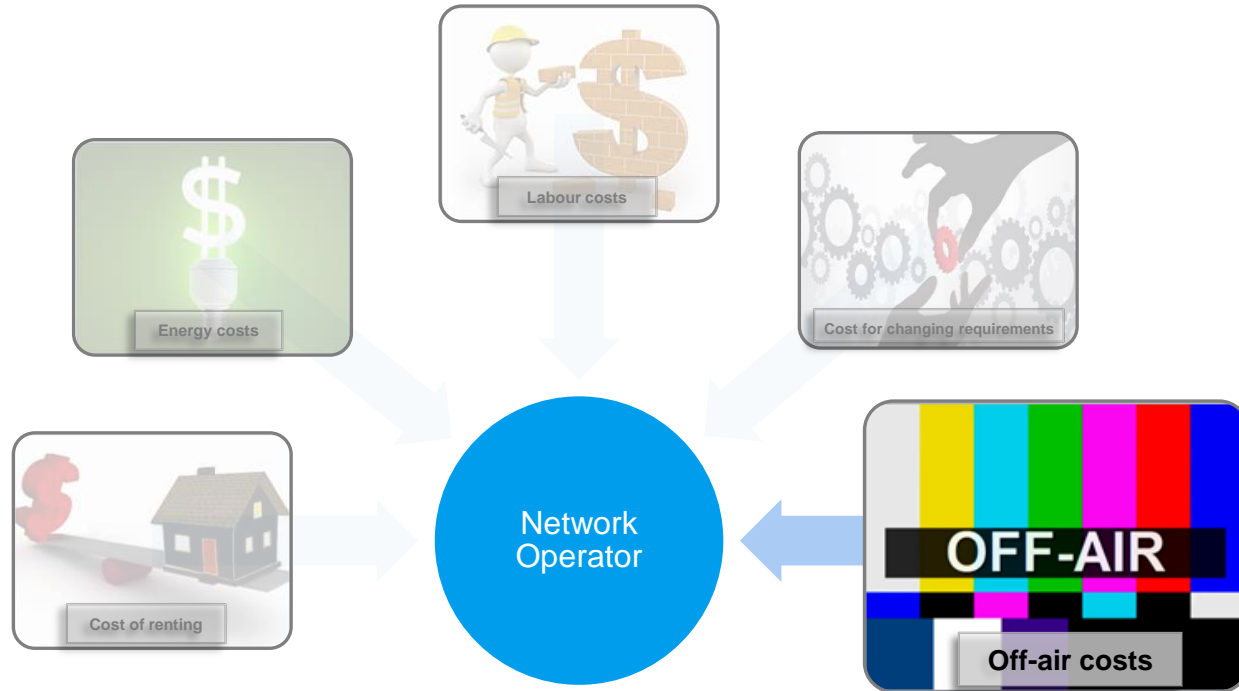
# Reducing costs for changing requirements

## Prepared for additional modules



# Total cost of ownership

## Reducing off-air costs



# Thank you very much for your attention

