Challenges of auditing economy, efficiency and effectiveness
The Three Little Pigs
Who’s afraid of the big bad wolf?
Minimising the **cost** of your inputs (materials, labour, etc.)
Efficiency

Getting the **most** outputs from your inputs.

It’s how you **use** the materials and labour
Effectiveness

If you have met your intended objectives

...e.g. avoiding risks.....
Effectiveness

...or achieved your intended impact...

... in the end....you are effective!
Why things are as they are?
How can they be improved?
Performance of sewage plants

*Do the sewage treatments plants achieve adequate performance? (ECA 3/2009)*

<table>
<thead>
<tr>
<th>Efficiency:</th>
<th>Effectiveness:</th>
<th>Effectiveness:</th>
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<tbody>
<tr>
<td>Are the plants operating at appropriate capacity?</td>
<td>Is the quality of the effluent acceptable?</td>
<td>Is the sludge by-product being used appropriately?</td>
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Performance of sewage plants

- Households and industrial users not connected;
- Plants operating at lower than capacity;
- Inadequate pre-treatment of industrial waste;
- Plants storing sewage;
Spending on water for domestic consumption

Is the spending on water for domestic consumption used to best effect? (ECA 9/2010)

**Economy:**
Were the projects achieved at the lowest cost to the EU budget?

**Efficiency:**
Were the most appropriate solutions adopted to meet the needs?

**Effectiveness:**
Did the project improve the supply of water?
Spending on water for domestic consumption

- Analysis of possible solutions was limited to supply side measures, rather than water saving measures;
- Projects redundant due to missing links in the water supply network;
- High levels of non-invoiced water;
- Project delays and cost overruns;
- Weaknesses in grant processes,
- No assessment of potential cost recovery from users.
Common challenges (performance or environmental audit)

- Emphasise audit planning
- Break down the audit into specific audit questions.
- Obtain adequate data
- Use external experts
- Use international standards as audit objectives and criteria
- Conduct physical site inspections
- Collect photographic evidence
- Use results-based observations

Source WGEA 2007
Putting the “environment” into the economic equation
How much is this worth to you?

Total economic value = the monetary measure of a change in an individual’s well being, due to a change in environmental quality.
Dealing with the unfamiliar
Data availability and reliability

- Be receptive to **alternative views** and arguments and seek data from different sources and stakeholders.

- PA requires **significant judgement and interpretation** in concluding against audit questions.

- Look for **comparative data** in other countries or jurisdictions as criteria and benchmarks.

- We shouldn’t aim to be “conclusively correct” but “**persuasively believable**”.
THANK YOU
FOR YOUR ATTENTION