



ACTUARIAL SOCIETY 2015 CONVENTION

# Getting to the bottom of the economic bottom line:

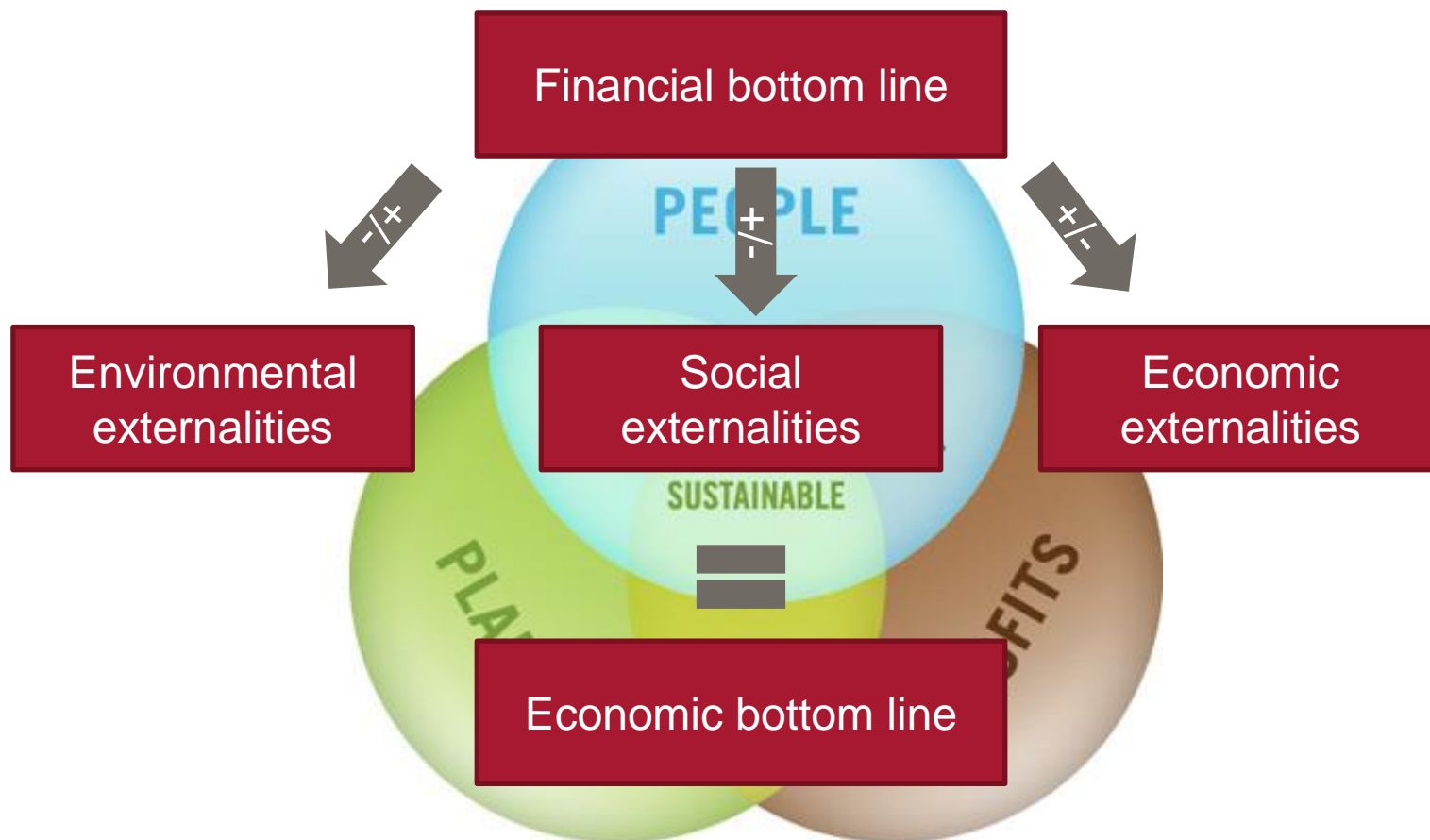
Exposing the quantification issues, current attitudes and potential gains to using the economic bottom line

By Dan J. Ginsberg & Taryn L. Reddy

# Agenda

1. Exploring the economic bottom line
2. The issues
3. Current approaches to externality incorporation
4. The attitudes
5. The solutions
6. Implications for actuaries
7. Conclusions
8. Questions

# 1. Exploring the economic bottom line



## 2. The issues

Measurement

Quantifying

Methodology

Consistency



# 3. Current approaches to externality incorporation

## PUMA'S ENVIRONMENTAL PROFIT & LOSS ACCOUNT world's first E P&L

	Water use \$ million	GHGs \$ million	Land use \$ million	Other air pollution \$ million	Waste \$ million	TOTAL \$ million	% of total
	33%	32%	26%	7%	2%	100%	
<b>TOTAL</b>	<b>47</b>	<b>47</b>	<b>37</b>	<b>11</b>	<b>3</b>	<b>145</b>	100%
PUMA operations	.	●	.	.	.	<b>8</b>	6%
Tier 1	.	●	.	.	●	<b>13</b>	9%
Tier 2	●	●	.	.	●	<b>14</b>	10%
Tier 3	●	●	.	.	●	<b>27</b>	19%
Tier 4	●	●	●	●	●	<b>83</b>	57%

www.trucost.com

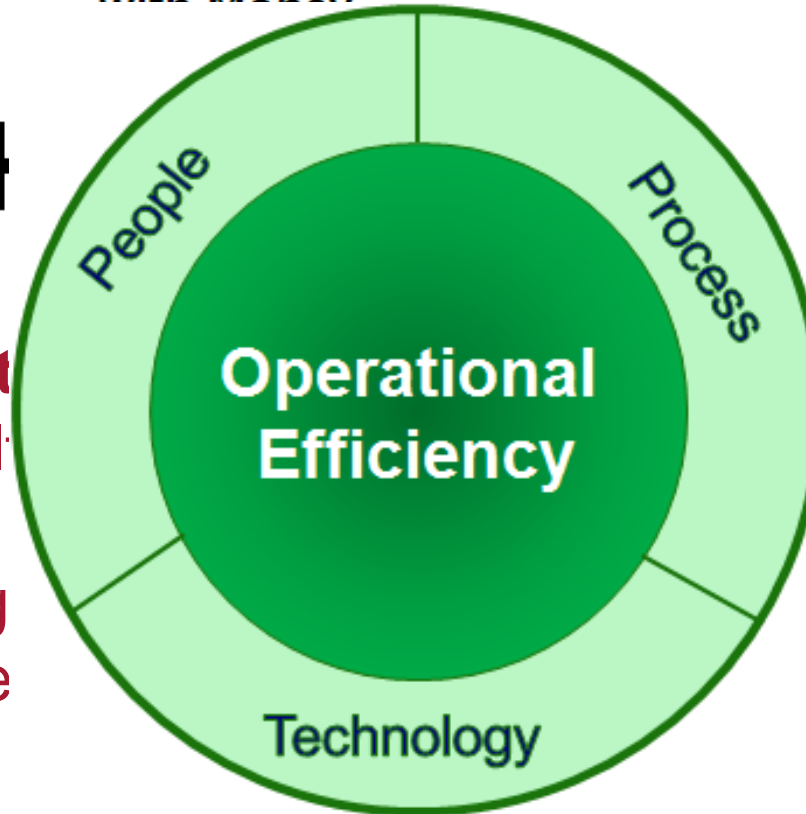
# 4. The attitudes

Company



Capitalistic Society

+



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## 5. The solutions

- Treat the cause – not the effect
- Societal value change
- Legislation
- Further research on externality measurement



# 6. The actuaries

❑ We model the financial bottom line

❑ Paradigm shift

❑ Obligation to act in the public interest





## 7. Conclusions

1. Externalities are the key difference.
2. Measuring is a challenge (particularly social externalities) – but progress possible.
3. Ethical considerations need to be debated.
4. The EP&L Account may aid with externality management
5. Society should drive economic incentives.
6. Actuaries have the skills to play a role.



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# Questions?