



Water 2020 consultation: Ofwat's proposed market model and regulatory design for sludge

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Water 2020 December 2015 consultation  
What are we proposing for sludge?

Key features of Ofwat's preferred option being consulted on for sludge regulation:

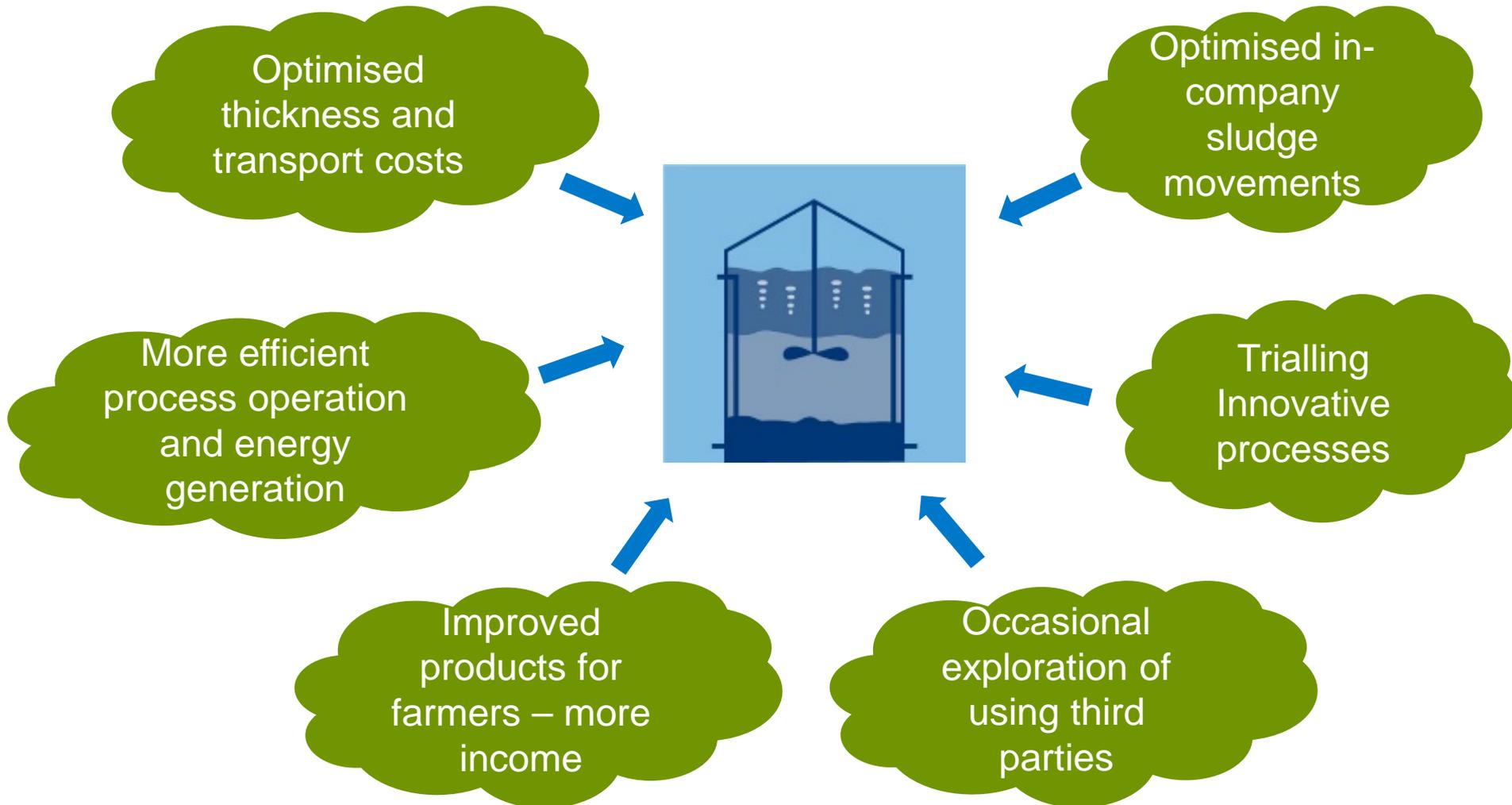
- Information platform
- Bid assessment.
- Binding separate price control
- Protection of existing investment



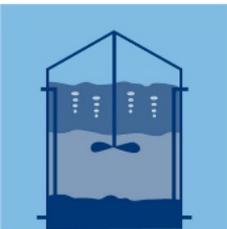
The Water 2020 programme is about identifying where, and how, we might change our approach to regulating water and sewerage services, to deliver:

- trust and confidence in the sector; and
- UK and Welsh Government's legislative commitments.

## Incremental improvements, saving a few ££?



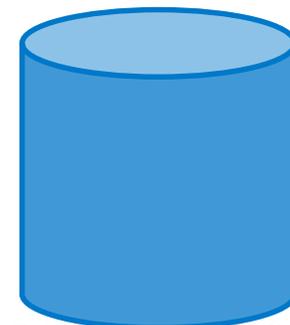
# What opportunities are there if we do change our regulation of sludge?



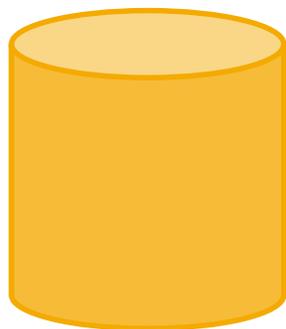
Commercial  
waste co.



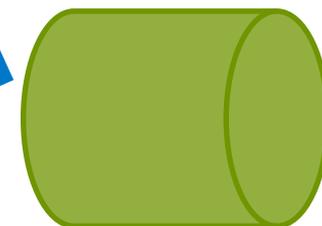
Townsville WwTW,  
WaSC X



Bigtown STC,  
WaSC X



Supertown STC,  
WaSC Y.



Novel Tech Co

## Why do we think there is scope to use markets in sludge?

### There is scope to use markets because...

- 1 Potential gains from local market between WaSCs.
- 2 Unrealised gains from market with firms in wider waste markets.
- 3 Dynamically increasing demand over time - change in biosolids use and technology.
- 4 Relatively less stranded asset risk - shorter asset lives.

### We know this because...

- We have analysed the scope for trades between companies by geography.
- We have surveyed potential entrants.
- We have analysed usage patterns over time.
- We have examined investment requirements.

## What needs to be addressed in order to realise benefits?

### Within our influence / control

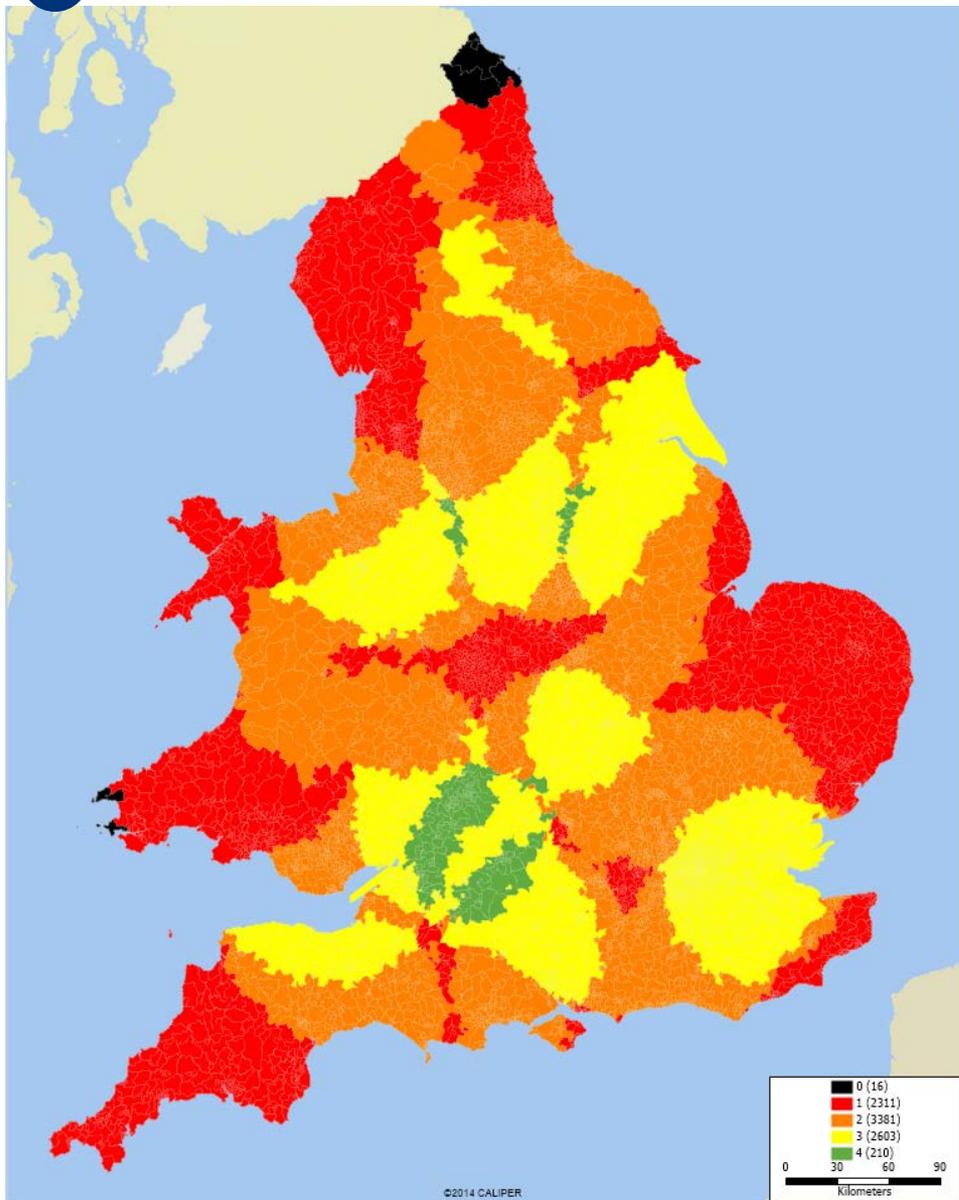
Missing information  
Regulatory incentives  
Cultural issues

### Outside our influence / control

Environmental regulations  
Transport costs

Consistent with 2011 OFT study.

1



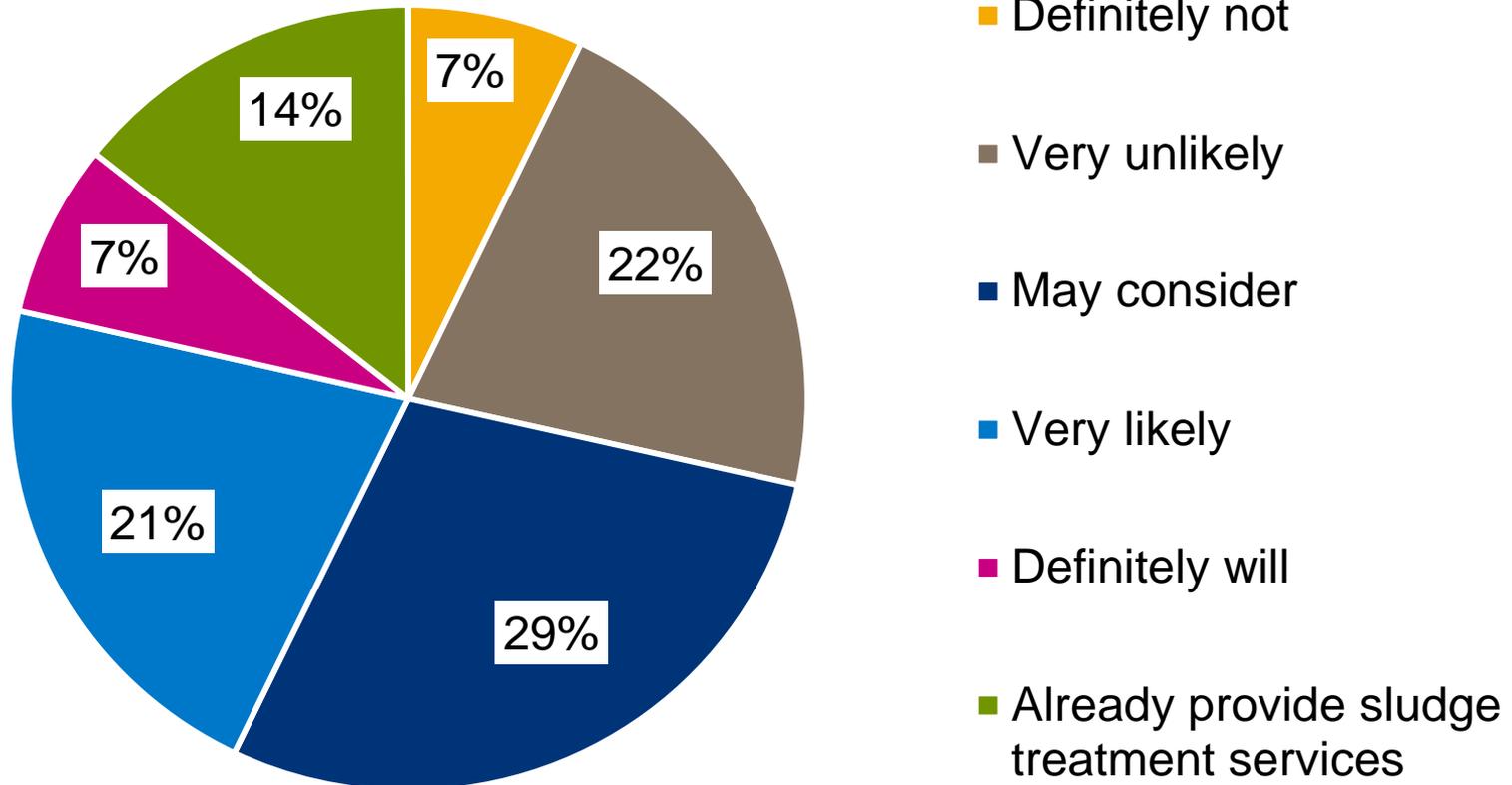
Number of rival WaSCs with STCs within 50km radius	Proportion of STCs
0	33%
1	42%
2	23%
3	2%

50km radius:  
67% of STCs

Drive distances of 50km:  
42% of STCs

2

To what extent do you think it is likely your organisation would, during the next five years, consider entering the market for the treatment of sludge?

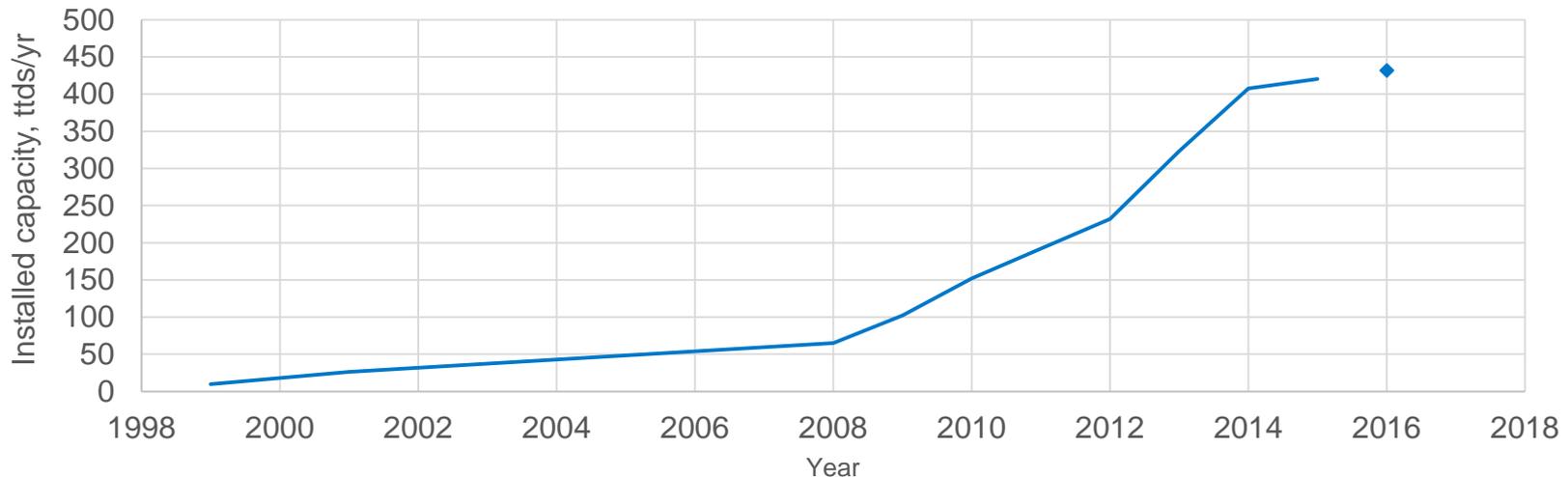


3

## Sludge re-use and disposal routes – tonnes dry solids

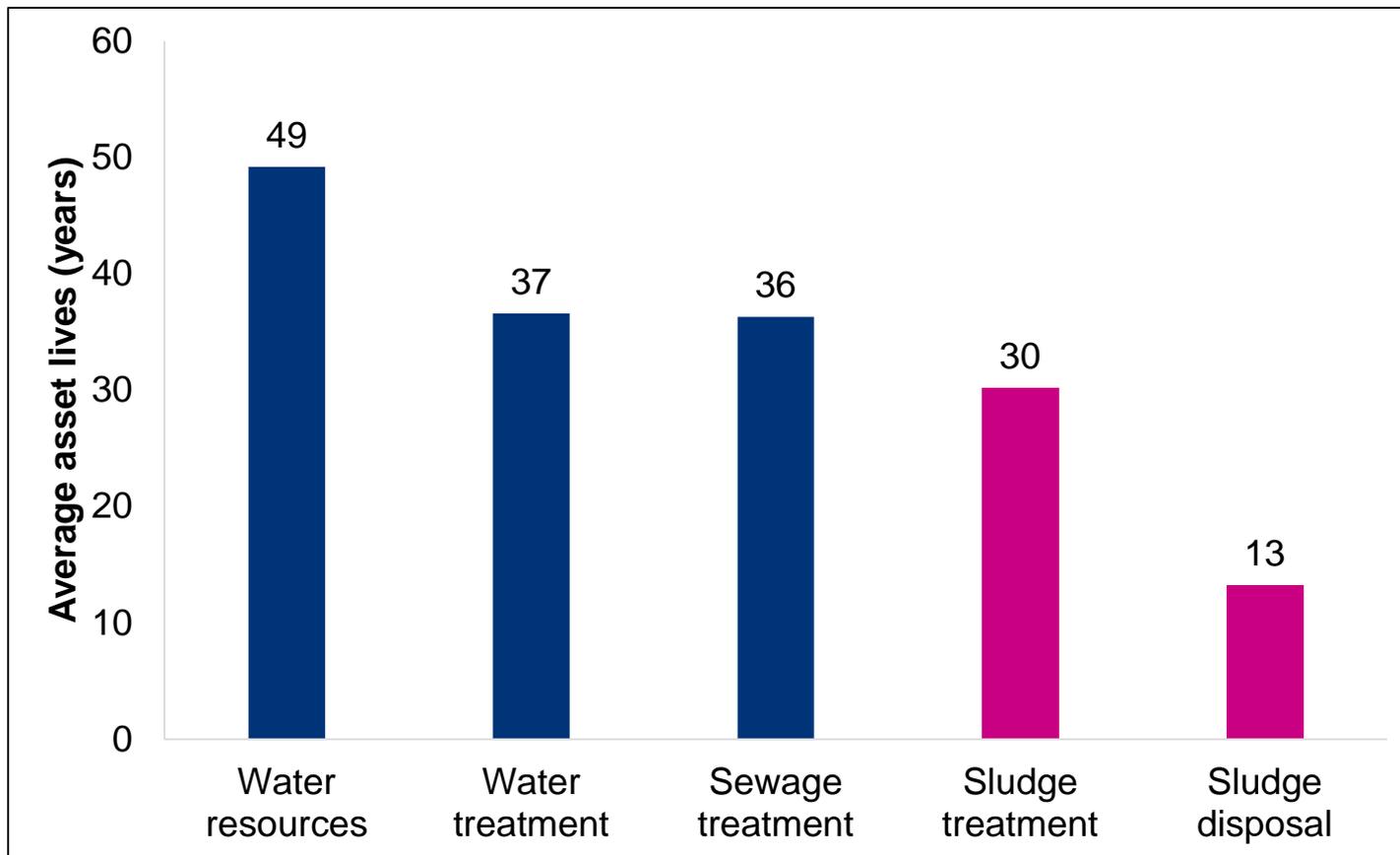
Reuse or disposal route	Others		Sludge reused		Sludge disposed			Total
	Pipelines	Ships	Soil and agriculture	Others	Landfill	Incineration	Others	
1992	8,430	273,158	440,137	32,100	129,748	89,800	24,300	997,673
2008	-	-	1,241,639	90,857	10,882	185,890	1,523	1,530,779
2010	-	-	1,118,159	23,385	8,787	259,642	2,863	1,412,836

## Installed capacity in England and Wales of one supplier's new sludge treatment technology



4

## Average asset lives



## Value chain component / activity

Raw sludge



Thickening

...

Raw sludge transport



Sludge treatment

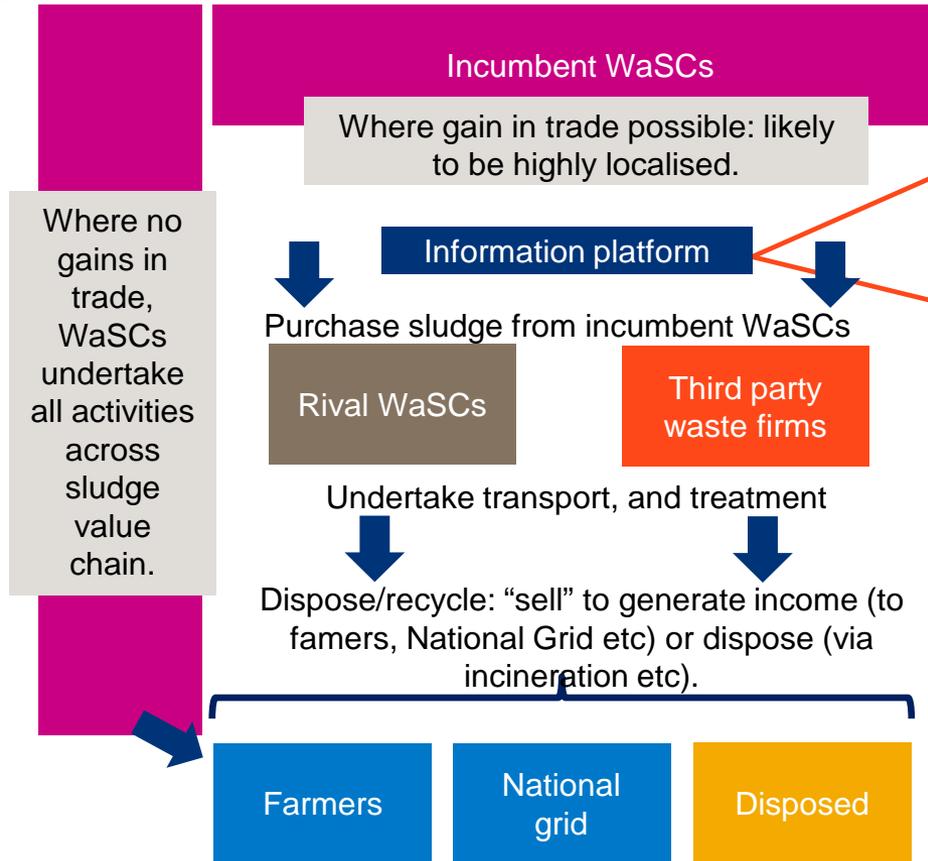


Treated sludge transport



Disposal/ recycling

## Possible market interactions



## Market and regulatory mechanisms

**Market information** - to help identify gains through trade.

**Price / bid assessment guidance:** for transparency and to avoid discrimination against third parties

**Binding price control** on incumbents to avoid cross-subsidisation between sewage treatment and sludge

We anticipate our approach could evolve as market prices emerge

Things we would need...	Because....
<p>A separate binding price control for sludge treatment, transport and disposal.</p>	<p>To mitigate cross-subsidisation concerns, and support a level playing field. To provide improved information for setting incentives.</p>
<p>We need information sharing in relation to sludge production and treatment</p>	<p>It's hard for rival WaSCs or other waste firms to identify opportunities to trade in sludge. Propose an information sharing platform: locations, capacity, sludge quality, etc. This would allow firms to identify opportunities and “bid in” to WaSCs. Need transparency from WaSCs assessing any bids.</p>
<p>Price control initially set reflecting return on RCV (like we do now)</p>	<p>Keep ‘return on RCV’ approach for setting sludge price limit. However, as market develops we may reveal ‘competitive’ prices. This could allow a move towards a gate fee or £s per tonne approach.</p>
<p>We would allocate a proportion of the RCV to sludge.</p>	<p>To set a separate price control, we need to allocate RCV between sludge and the rest of wastewater wholesale.</p>
<p>Mechanism to address (historical) stranded asset risk.</p>	<p>Proposed model allows competition in the market – so in principle there could be some risk of asset stranding. We do not want historical investment to be exposed to changed risk profile. So need a mechanism that protects historical investment.</p>



In order to unlock the benefits of sludge markets – we will need to get more clarity on a number of factors – for example:

How might the market vary by geography?

e.g. would regulatory design be compulsory for 'all' or optional / different by geography?

How might new information be revealed and what benefits might it bring?

What are the practical issues that might need to be addressed?

What are the key environmental / quality / health considerations?

How do we value the sludge assets of the WaSCs?

What else??



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