The Great
CAPEX versus OPEX
Divide
Hi, pleased to meet you...

Gavin Lawrenson
Technical Director
Ferrovial Servicios Centre of Excellence Environment
So, tell me a bit about yourself...

**Construction**
- Civil Engineering.
- Industrial Engineering.
- 80 years of experience.
- Water.

**Airports**
- Largest private investor in airports.
- 25% stake in HAH.
- 4 airports in the UK.
- 84.9 mn passengers.

**Services**
- Municipal services and waste management.
- Infrastructure maintenance.
- Focus on intelligent cities, waste reuse and energy efficiency.

**Toll roads**
- Leader in private sector transport infrastructure development.
- Toll road management: 407 ETR and 22 other roads in North America and Europe.
- Concessions in 7 countries.
That’s nice – so what do you do?

• **Amey Local Government Waste (AmeyCespa)**
  • Combining the Amey track record in UK Infrastructure projects with the Ferrovial experience in Waste Treatment
  • Broad base of Local Government Services can be integrated into bids

• **Target projects with secured waste feedstock**
  • PFI / PPP
  • Long-term contracts (collections and/or treatment)

• **Develop end-to-end strategy for Bid-Deliver-Operate**
  • Collaboration between Amey Business Units to integrate a solution
You’re into long-term relationships then?

- **Owner – Operator strategy**
  - Clients know that the same entity will bid and deliver a project
  - Robust Bid / No Bid Process!
  - Amey assume Construction Risk, avoiding traditional EPC approach
  - Construction Risk is viewed against Operational Risk
  - Ferrovial Centre of Excellence provides support across geographies

- **Finding Whole-life project benefits**
  - Identified early & guaranteed – used in Win Strategy
  - Identified late – contribution to Risk Pot
  - Promotes partnering approach with sub-contractors
You’re into long-term relationships then?

Contract Structure: **Milton Keynes Waste Recovery Park (MKWRP)**
You’re into long-term relationships then?

Contract Structure: **Allerton Waste Recovery Park (AWRP)**
Been anywhere nice lately?

- 15 year contract
- 10 years residual life
- 132,000 tonnes/year
  - 14,000 tonnes/year recyclate
  - 32,000 tonnes/year to AD
  - 93,000 tonnes/year to Gasification
- 7MWe Power exported

MKWRP

June 2014 – Demolition and clearing
June 2014 – Commenced civils
January 2016 – Commissioning start
April 2016 – First waste
September 2016 – Full service
Been anywhere nice lately?

- 25 year contract
- 5 years residual life
- Up to 320,000 tonnes/year
  - 12,500 tonnes/year recyclate
  - 40,000 tonnes/year to AD
  - Up to 320,000 tonnes/year to EfW
- 25MW Power exported

AWRP

January 2015 – Site clearing
February 2015 – Commenced civils
April 2017 – Commissioning start
May 2017 – First waste
February 2018 – Full service
Ooh, nice motor – and cheap to run too?

CAPEX vs OPEX Example 1: Steam Turbine, AWRP

The Problem...
- PFI credits withdrawn from the AWRP project
- Additional VfM required by Client

The Solution...
- Vinci Environment offered the opportunity for an “upgraded” Turbine
- Additional CAPEX requirement → Upfront cost increase
- Increase in Turbine efficiency → Increased revenue for 25 years of operation
Ooh, nice motor – and cheap to run too?

**AmeyCespa engaged with Siemens → Turbine selection optimised**

- Whole-life cost/benefit of Turbine versus return on additional CAPEX invested
- Additional revenue returned to the Financial Model to increase VfM to the Client
- Significant contributor to saving the project post-PFI credits withdrawal
Ooh, nice motor – and cheap to run too?

CAPEX vs OPEX Example 2: Flue Gas Treatment, AWRP

The Problem...
- Lime usage and Air Pollution Control Residue (APCr) - both high in design calculations

The Solution...
- Vinci Environment proposed a recirculating FGT
  - Additional CAPEX requirement → Upfront cost increased
  - Unspent reagent recirculated in the FGT → Reduced Lime consumption and APCr production
Ooh, nice motor – and cheap to run too?

**AmeyCespa obtained improved performance guarantees**
- Whole-life cost/benefit of new FGT versus return on additional CAPEX invested
- Additional operations and maintenance costs taken into account
- Additional net revenue returned to the Financial Model to increase VfM to the Client
Wow, you’ve really thought this through!
Wow, you’ve really thought this through!

Reduction in No of suppliers (complete E&I process & packaging)
Reduced interfacing of equipment
Reduced Training costs
Reduced Spares Holding
Reduced cost of procurement
Reduced number of Service Contracts
Reduced Software Engineering effort by standardisation
Improved asset serviceability
Increased OEM & SI support
Reduced energy costs

Overall Potential Savings 13.4%
QUESTIONS?

Gavin Lawrenson

gavin.lawrenson@amey.co.uk