Sustainable Solihull forsuccess

Lend Lease

TOUCHWOOD
EST. 2001

Solihull Sustainability Visioning Group's

Touchwood Sustainability Breakfast Business Visit

9th July 2014 'The Hub' Touchwood

Sustainability at Lend Lease

Hannah Kershaw
Environmental Operations Manager EMEA, Lend Lease

Lend Lease

What we do…

Defence

Project Management & Construction

Commercial

Investment Management

Infrastructure

Development

Education

Retirement & Medical

Retail

Infrastructure Development

Residential

WE FIND
Sourcing the best property opportunities

WE BUY
Structuring the right deal

WE FUND
Providing the right investment solutions

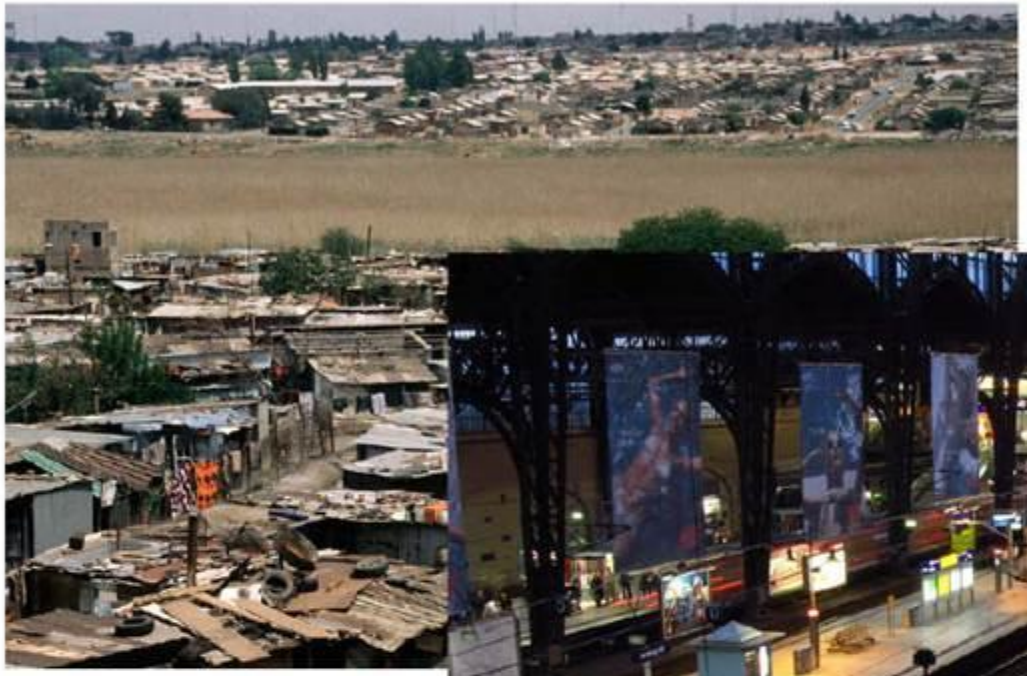
WE DESIGN
Creating innovative and sustainable property solutions

WE BUILD
Building and project managing using our global construction reach

WE MANAGE
Continually enhancing the value of property over time

OUR VISION

TO CREATE THE BEST PLACES



More than **half**
the world's population

lives in **Cities,**


but create more than 2/3 of all CO2 emissions,
Venice Blvd 1¼
Washington Blvd
Culver Blvd 1¾
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LOVE WHERE YOU LIVE
use 2/3 of the world's energy,
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Lend Lease

LOVE WHERE YOU LIVE

and produce 1 Billion tons of waste annually.

Lend Lease


Mount Sustainability….
Transformation
Business as a Force for Good
Restore, Heal
The Triple Bottom Line
Health & Wellbeing
Innovation
Innovate
Learn, embed, improve...
Save £
Resource efficiencies
Fundamentals
Measure things for the first time
Awareness

THE LEND LEASE SUSTAINABILITY FRAMEWORK

Sustainability framework at Lend Lease

- Looking beyond environmental sustainability to social and economic outcomes
- Reducing impact on the Environment, maximising future value
- Aligning the project with the values of its users, surrounding communities and enhancing productivity and well being

ENVIRONMENT

The resources we use will be recycled, responsible & re-usable.

- CARBON
- ENERGY
- WATER
- WASTE
- MATERIALS & SUPPLY CHAIN
- NATURAL ENVIRONMENT

SOCIAL

Every place we create will leave a positive social legacy.

- CREATING COMMUNITY
- DIVERSITY & CULTURE
- SAFETY, HEALTH & WELLBEING
- EMPLOYMENT, SKILLS & TRAINING

ECONOMIC

We will future ready our business and the built environment.

- GOVERNANCE & RESPONSIBLE INVESTMENT
- CLIMATE CHANGE
- INNOVATION
- VALUE CREATION

THE TRIPLE BOTTOM LINE

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Real World Steps to Sustainability

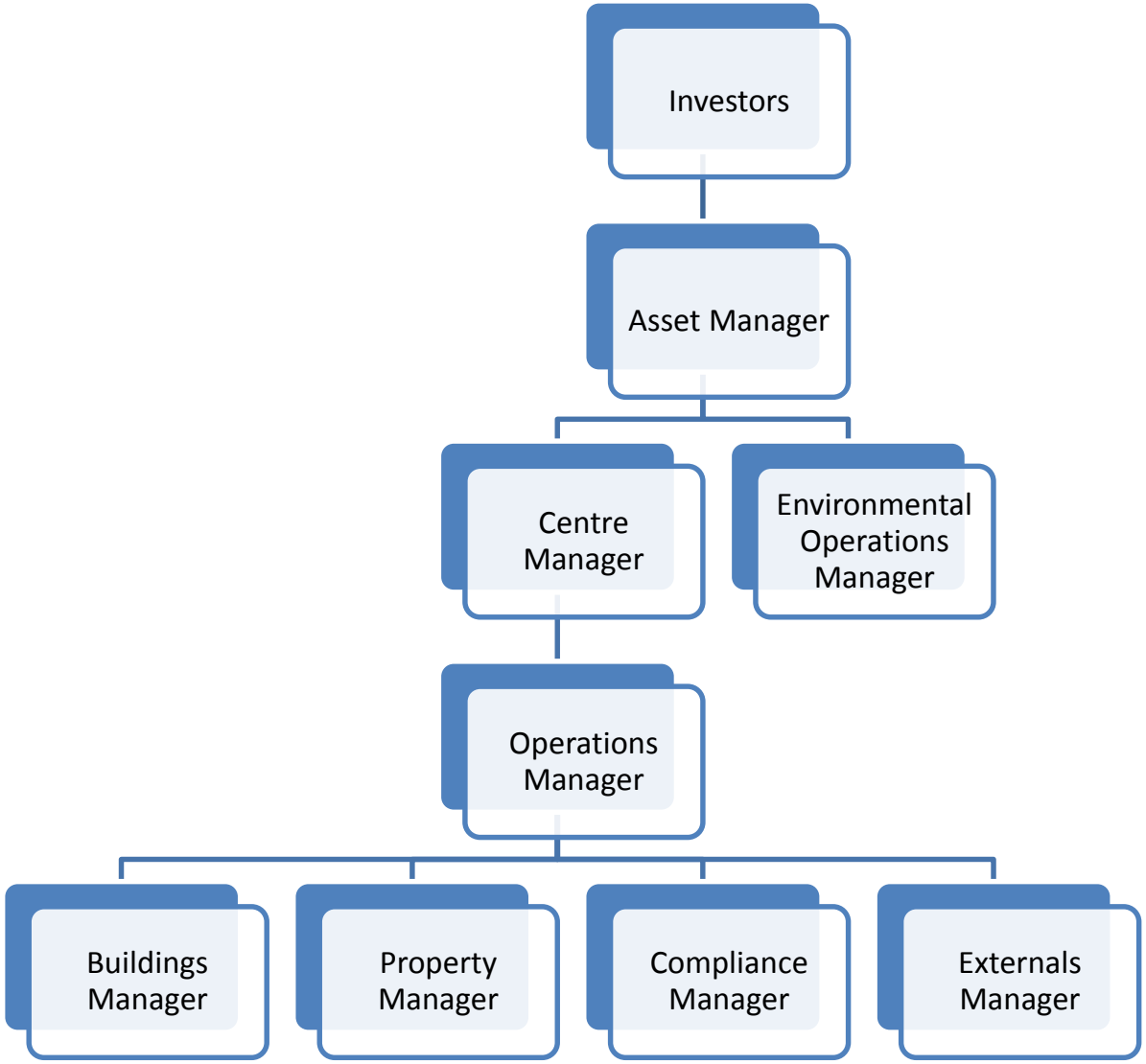
The Next Thirty Minutes…

- Sustainability Strands
- Real World Results
- Culture and Motivation
- Measurement
- Projects
- The Importance of Phasing
- Procurement

The Background of Touchwood

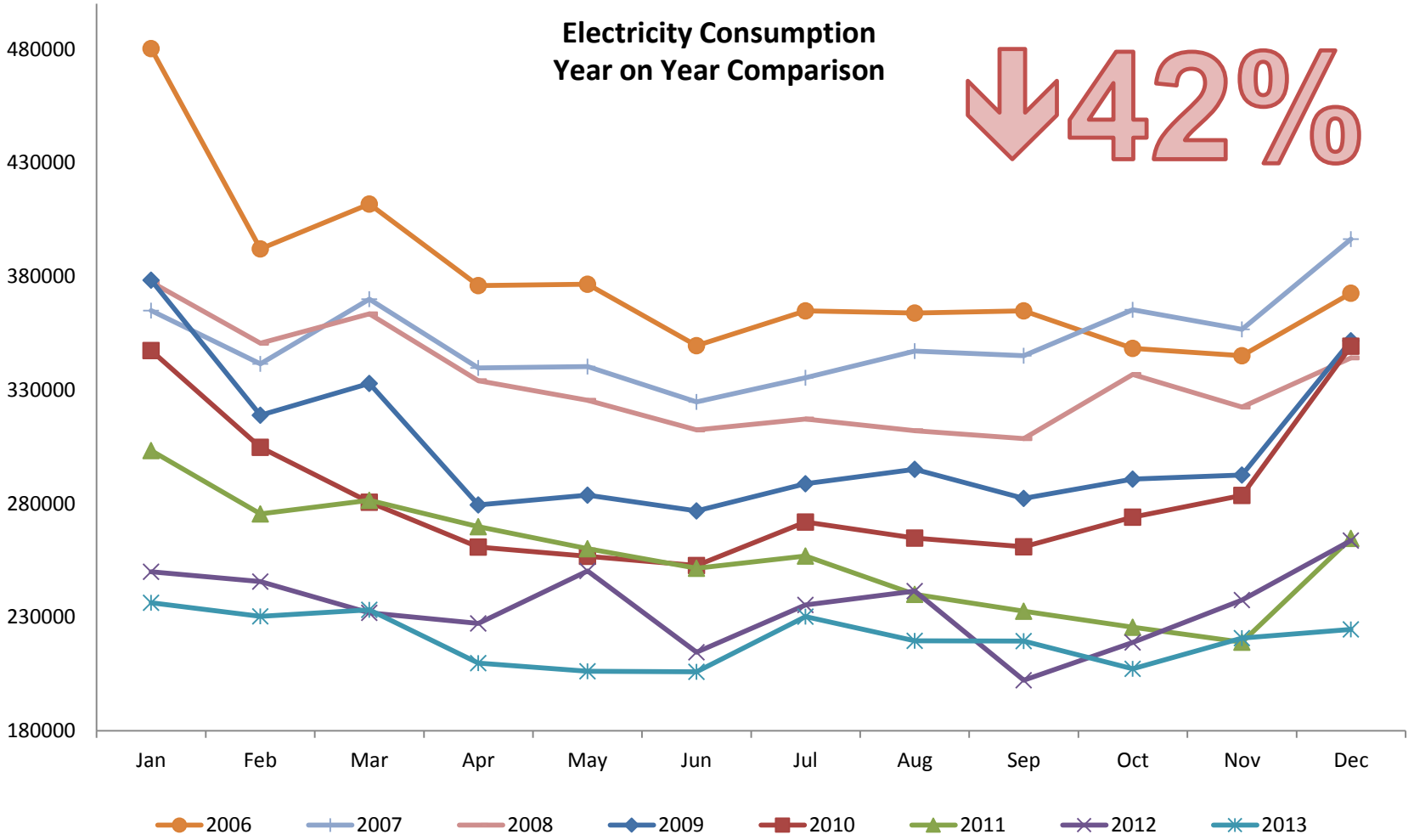
- Opened in 2001
- 650,000sqft centre
- 14.5 million footfall a year
- Over two million car trips a year
- ISO 14001 Accreditation
- Winner of a ‘Green Apple’ award
- Shortlisted for the ‘Sceptres’
- 100% diversion from landfill
- Over 55% of waste is recycled

The Background of The Team



Sustainability Strands

Real World Results



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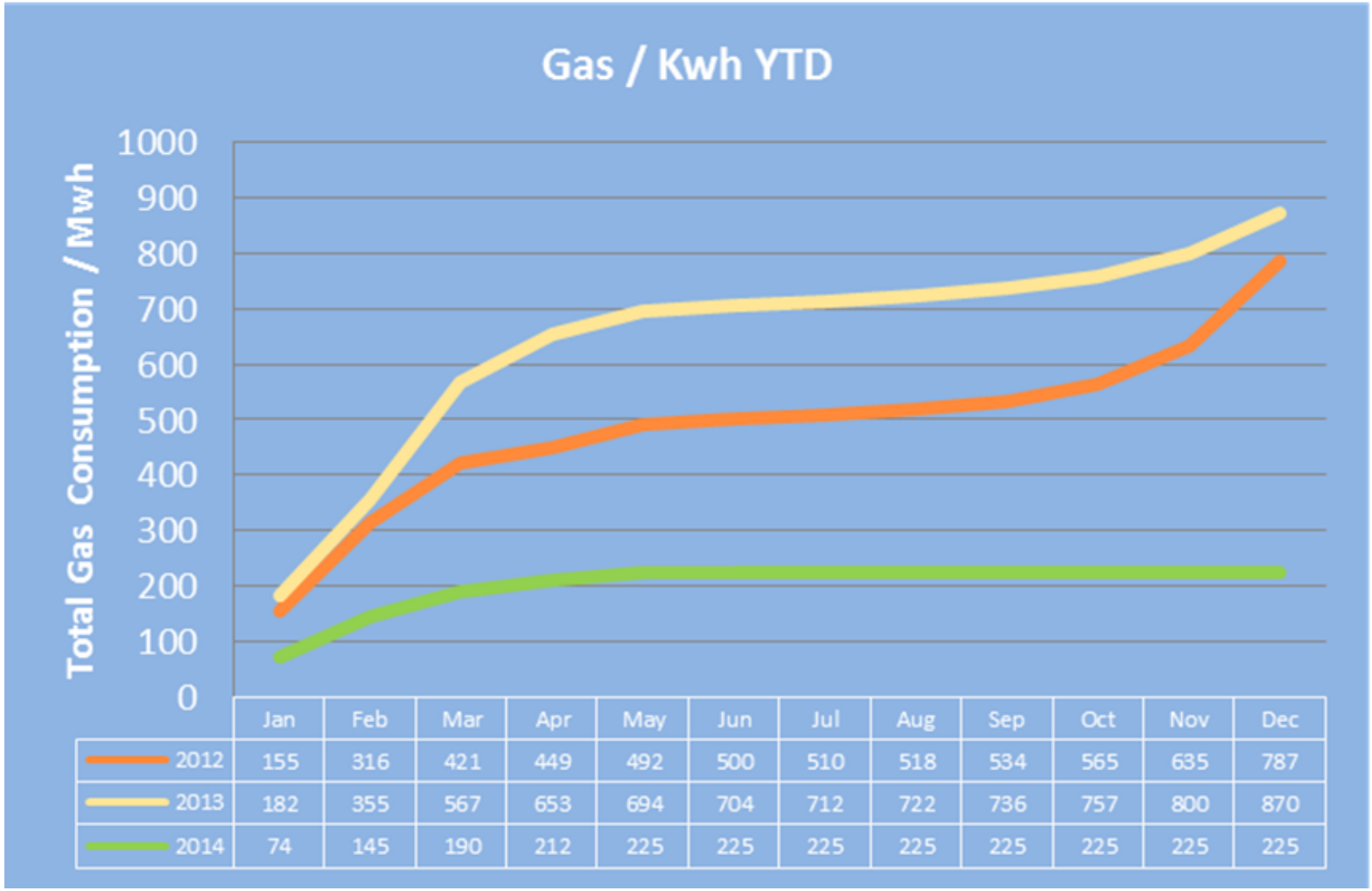
Real World Results



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	155	316	421	449	492	500	510	518	534	565	635	787
2013	182	355	567	653	694	704	712	722	736	757	800	870
2014	74	145	190	212	225	225	225	225	225	225	225	225

Culture and Motivation

- Top level management support is critical
- Breed a culture of sustainability
- Talk sustainability
- Encourage (not nominate) champions
- Give each team member an environmental objective
- Set high-level KPI’s for the business
- Measure progress
- Reward success
- Shout about achievements

What gets measured….

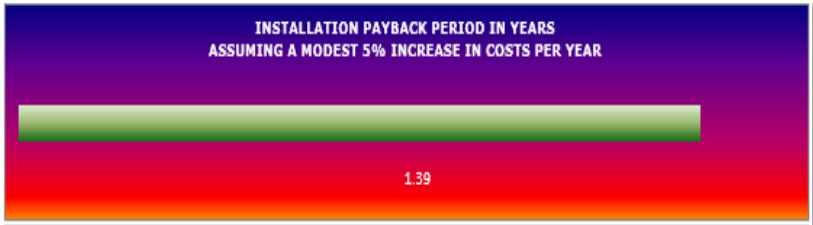
ENERGY SAVING LIGHTING
ENERGY SAVING CALCULATOR

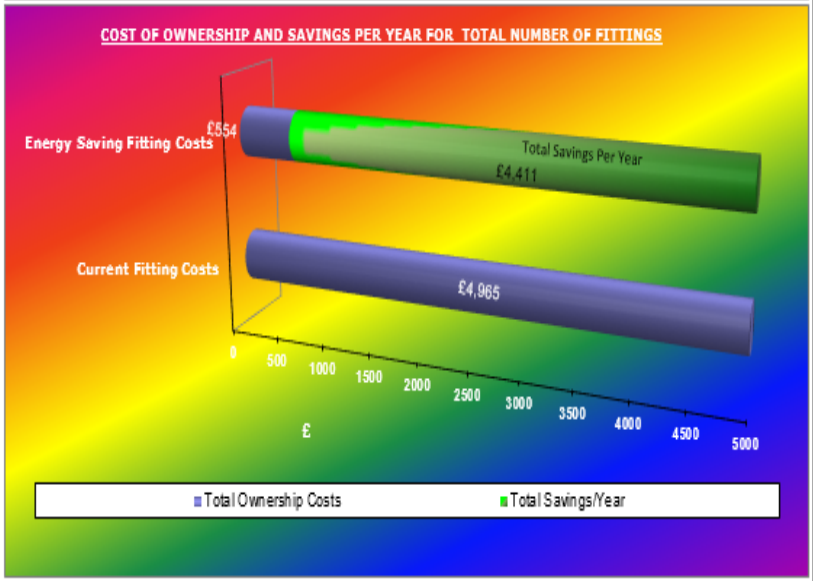
Compare Current or Traditional Light Source With An Energy Saving Alternative

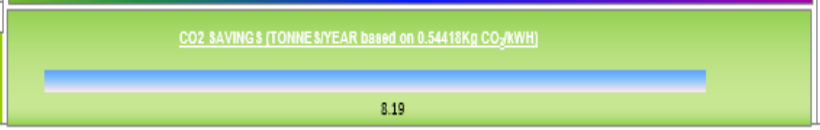
Project title: UPPER LEISURE 2 X 26WATT LIGHTING CONVERSION FROM 26 WATT T/E TO 14 WATT LED

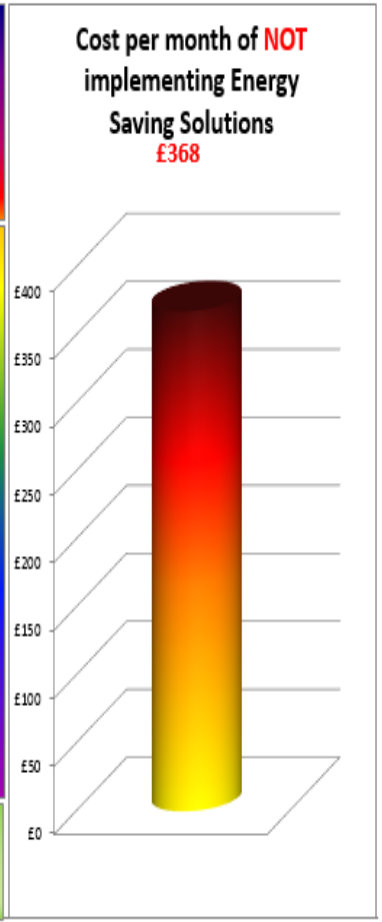
Enter your data here:		Current	Energy Saving Alternative
Additional Cost of fitting:	£	40.00	
Fitting guarantee years			
Average lamp/tube life hours		8000	10000
Average ballast life		10000	
Fitting Watts including gear at full power		26	14
Fitting Watts including gear @ standby power			
Cost of replacement lamp(s):	£	1.95	
Cost of replacement ballast:	£	13.00	
Cost of labour to replace lamp(s):	£	5.00	
Cost of labour to replace ballast:	£	15.00	
PC sum for annual cost of cleaning fitting:	£	0.00	0.00
Electricity cost per kWh in PENCE:		10	
Total no. of fittings/lamps to compare:		136	68
Burning hrs per day @ full power:		16.00	16.00
Burning hrs per day @ standby power:			
- days/wk		7.00	7.00
- wks/yr		52.00	52.00
Total hrs/yr:		5824.00	5824.00

Results:		Current Fitting	Energy Saving Fitting
- Energy cost/yr	£	15.14	8.15
- Re-Lamp cost/year inc. labour	£	5.06	0.00
- Ballast replacement cost/year inc. labour	£	16.31	0.00
Cost of ownership/fitting/yr	£	36.51	8.15
Savings per fitting per year	£	28.36	
Total Savings per year	£	4410.81	
Total Energy Savings(kWhrs per year)		15,049	









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What gets measured….

Name	Color Copies	BW Copies	Color Prints	BW Prints	Scans	Efaxes	TOTAL
FM	4858	13758	17436	23869	2994	471	63386
AM	225	3045	5743	23241	13062	20	45336
Steve Dawson	377	3160	1527	4275	404	93	9836
Andrea Gauntlett	0	1493	44	2784	5178	0	9499
Daxa Chauhan	168	417	2865	4643	1175	8	9276
Julie Poole	7	571	35	3767	4150	7	8537
Julie Thomas	986	852	1740	2622	283	53	6536
Sonia Kauser	40	373	574	4049	669	2	5707
Helen Brown	0	82	28	4167	1184	0	5461
Steve Calloway	272	369	1420	3190	1	0	5252
Sarah James	143	690	1585	2414	303	6	5141
Paul Bergman	8	164	3992	839	85	0	5088
Dave Powell	415	1061	1328	1988	160	19	4971
LucyBurnett	32	81	2301	2325	192	0	4931
Tom York	814	1728	413	1001	541	63	4560
Tammy Revell	11	310	58	2512	1094	5	3990
Jack Brassington	37	246	2450	394	125	0	3252
Dan Turner	203	240	1165	1027	597	0	3232

Big Stuff

- Lighting Schemes
  - Lighting follows cleaning regime
  - Sensor lighting wherever possible
  - Best generation technology
  - Separate essential from decorative

Big Stuff

Sensor Lighting Video

Big Stuff

Air Blades

Big Stuff

CO Sensors

Big Stuff

LIFTS

Big Stuff

Water Feature

Big Stuff

Air Conditioning

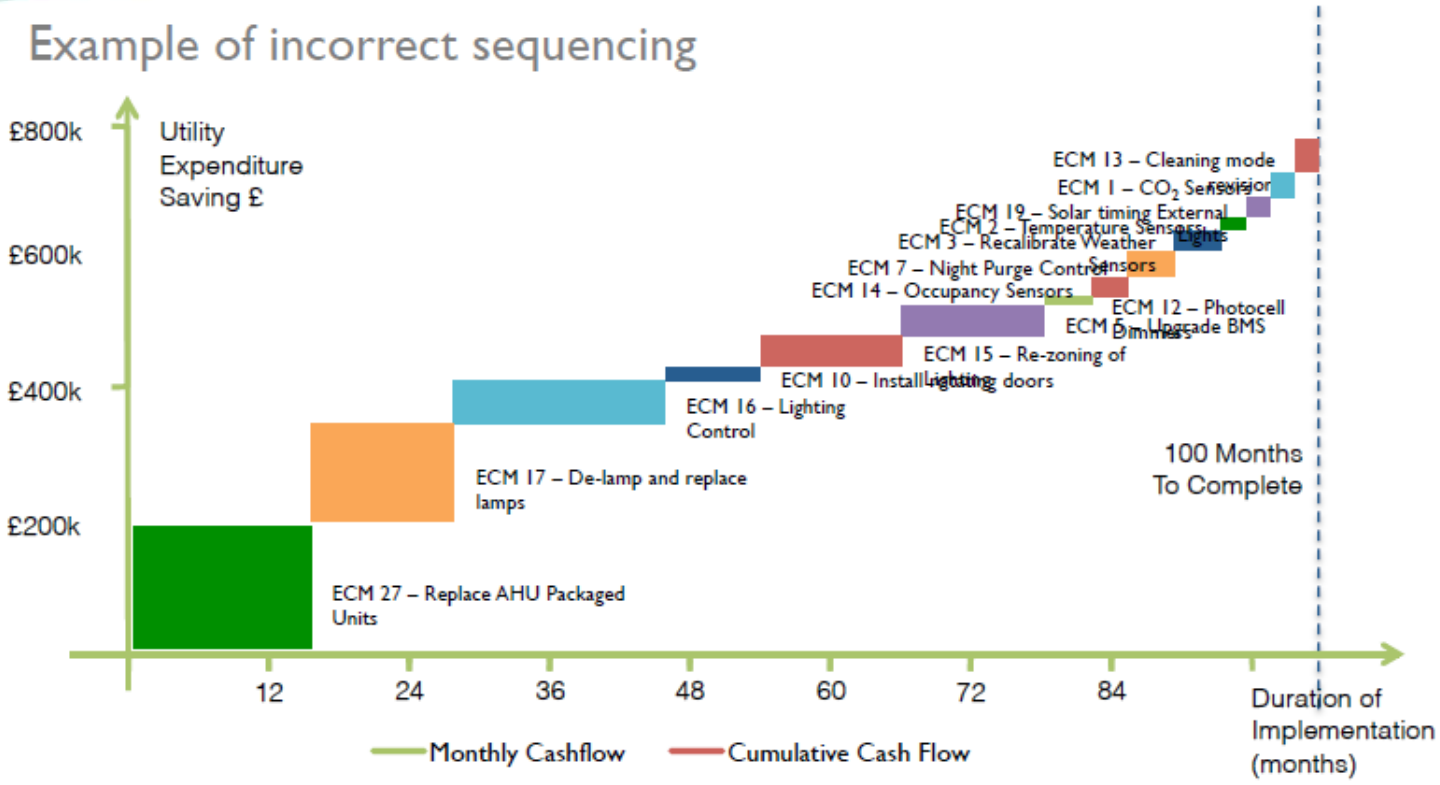
Lots of Little Stuff

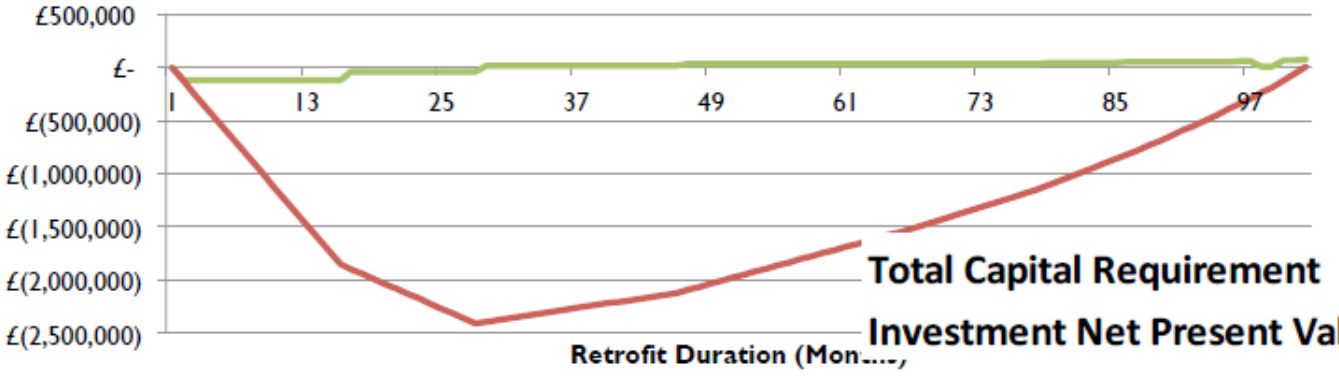
- Low hanging fruit has gone
- 11 new areas identified
- We found more big stuff
- Culture of continuous improvement
- Third party involvement

Phasing

- **Financial Accounting**
  - **ROI – is it at least cost neutral or the ‘right thing to do’?**
  - **Payback Period – an important consideration and is it accurate?**
  - **Timing of Works – do things at the start of the year to maximise payback period.**
- **Correct sequencing**
  - **It’s vital to program works to maximise savings and minimise payback period – do all the initiatives in the right order…**

Example of incorrect sequencing





Total Capital Requirement -£2,405,000

Investment Net Present Value -£955,482

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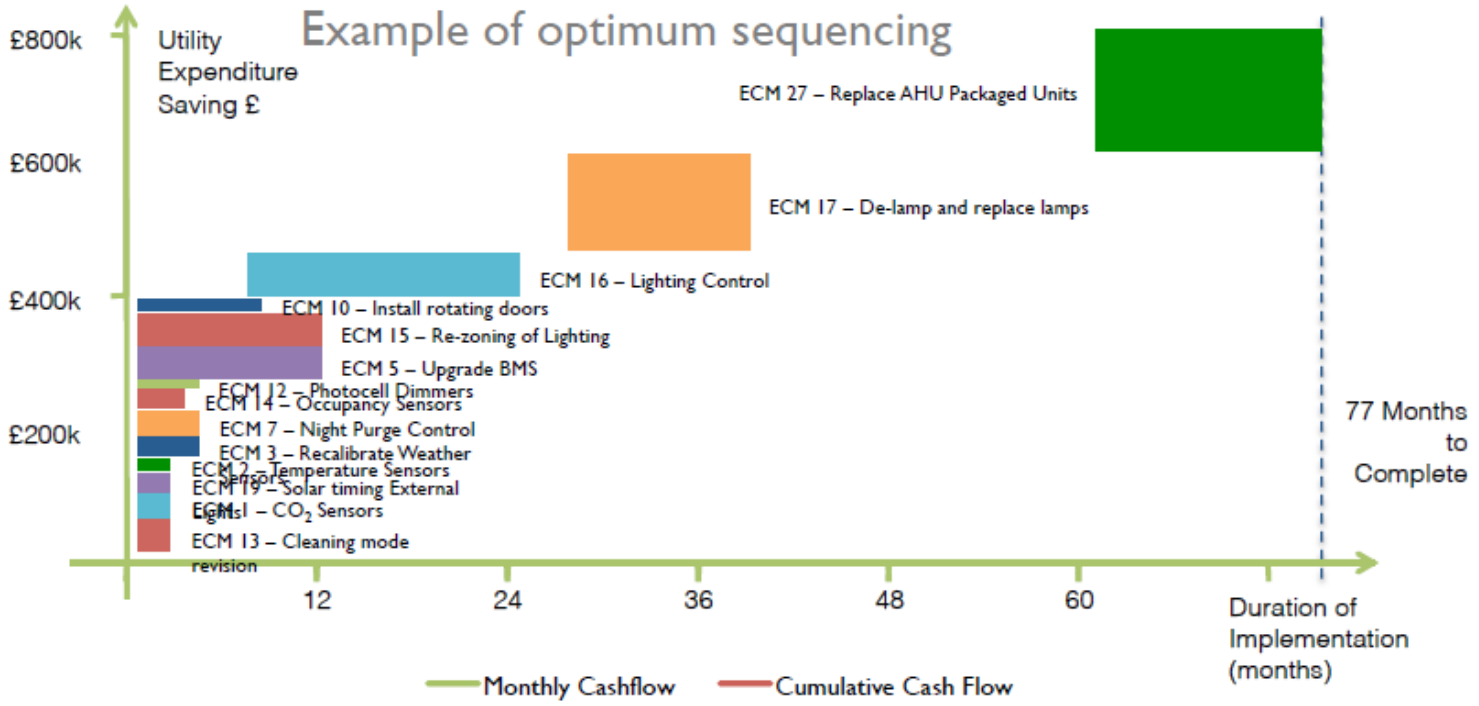
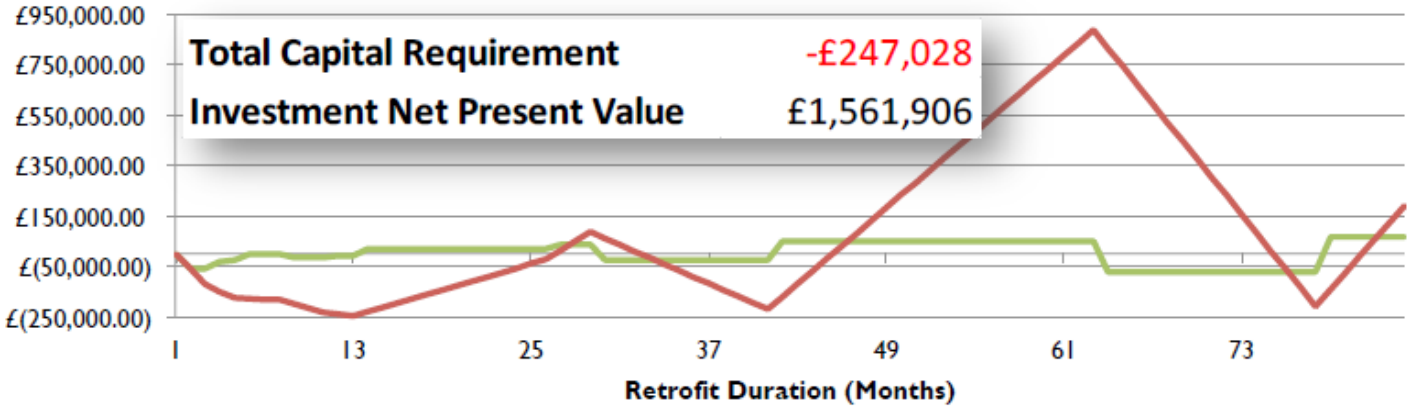
Example of optimum sequencing





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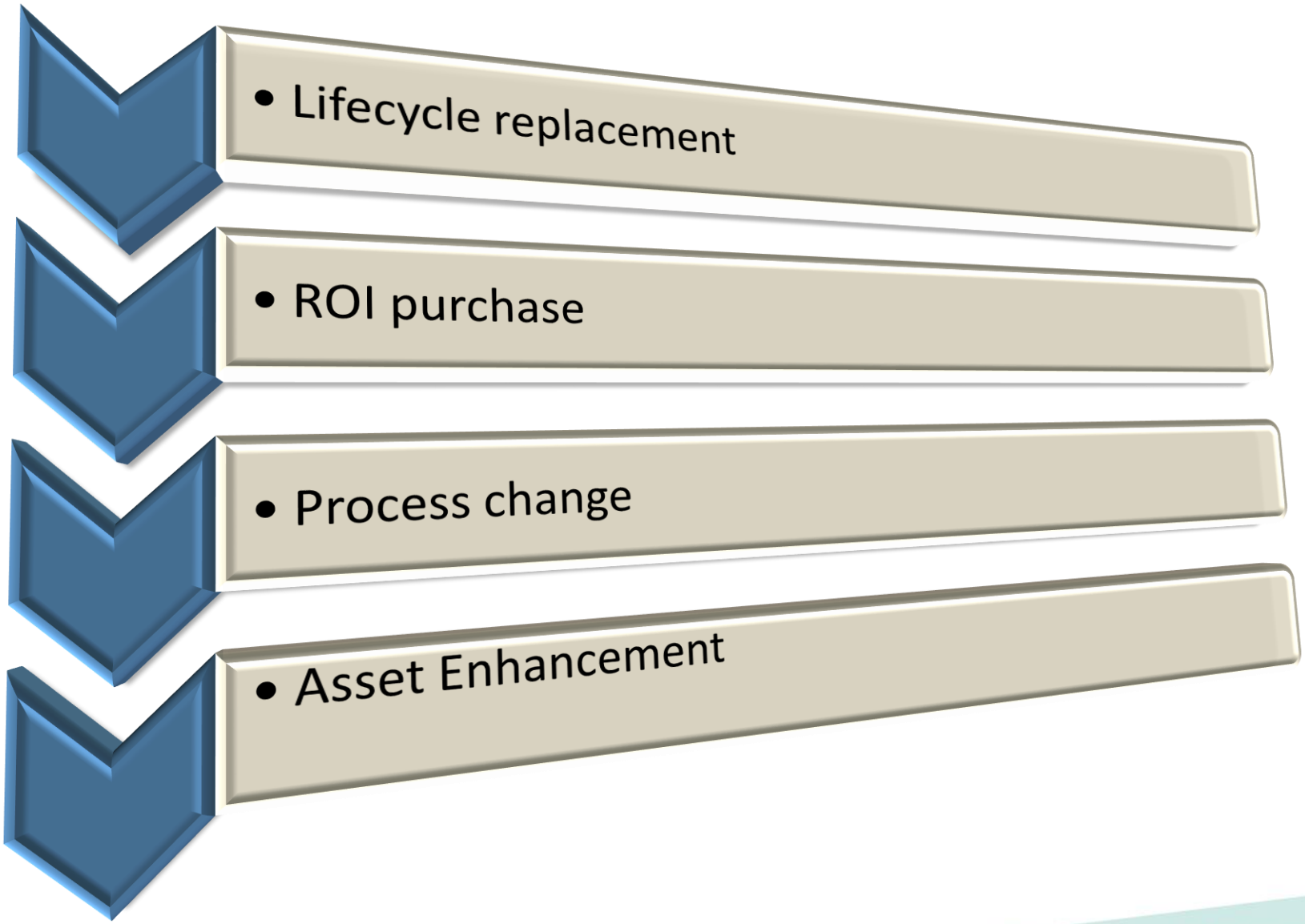
Procurement



Procurement

9. ENVIRONMENTAL SPECIFICATION (APPENDIX 8)

Summary/description of environment specification, such as operational and standby wattage etc.

Detailed bellow is the considerations which benefit our customer's efforts in reducing energy consumption. However, it should also be noted that Skidata consider Production, Logistics and Service and utilize processes or products which reduces the carbon footprint throughout the full life cycle management of its systems.

- Low voltage internal component architecture.
- Use of low power consumption microcontrollers and embedded CPUs within Skidata devices.
- Use of fan-free premium power supplies (pulse) with very high efficiency.
- Heating and fans are only needed outdoors; temperature thresholds for each device can be set individually for optimum performance.
- Power to the barrier motor is switched off completely when the barrier arm is in its end positions.
- Column display and attached readers can be switched off and then activated only when a vehicle is on the presence detection loop (display lighting, coder, long-range reader etc.).

	Device			
Status	**Column**	**Easy.Cash**	**Credit.Cash**	**Power. CASH**
Standard Mode	30 watts	50 watts	40 watts	50 watts
Heater in operation (outdoor use only)	180 watts	435 watts	420 watts	435 watts

Sleep Mode Argument:

Sleep mode solutions have their disadvantages in the parking equipment market and Skidata has employed advanced technologies to insure that the standard or normal mode of operation will significantly outperform the competition.

Skidata standard mode: **50 Watts**

Competition: **84.5 Watts**

Over the life of this project, the 34.5W difference in power equates to 49 million watts of consumption…!

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SUMMARY


Be Structured
Think Phasing
Breed a Culture
Measure Results
Keep Searching