Benchmarking and KPIs: 20 years of performance measurement

Don Ward, Chief Executive, Constructing Excellence

KPIs

KPIs produced in response to Egan review and first published in 1999 sought to:

- provide a simple performance measure for companies and projects

- track and benchmark performance

- track long term progress at an industry level.

We now have 19 years of KPI data

2003 All Construction KPIs

- focus predominantly on economic issues
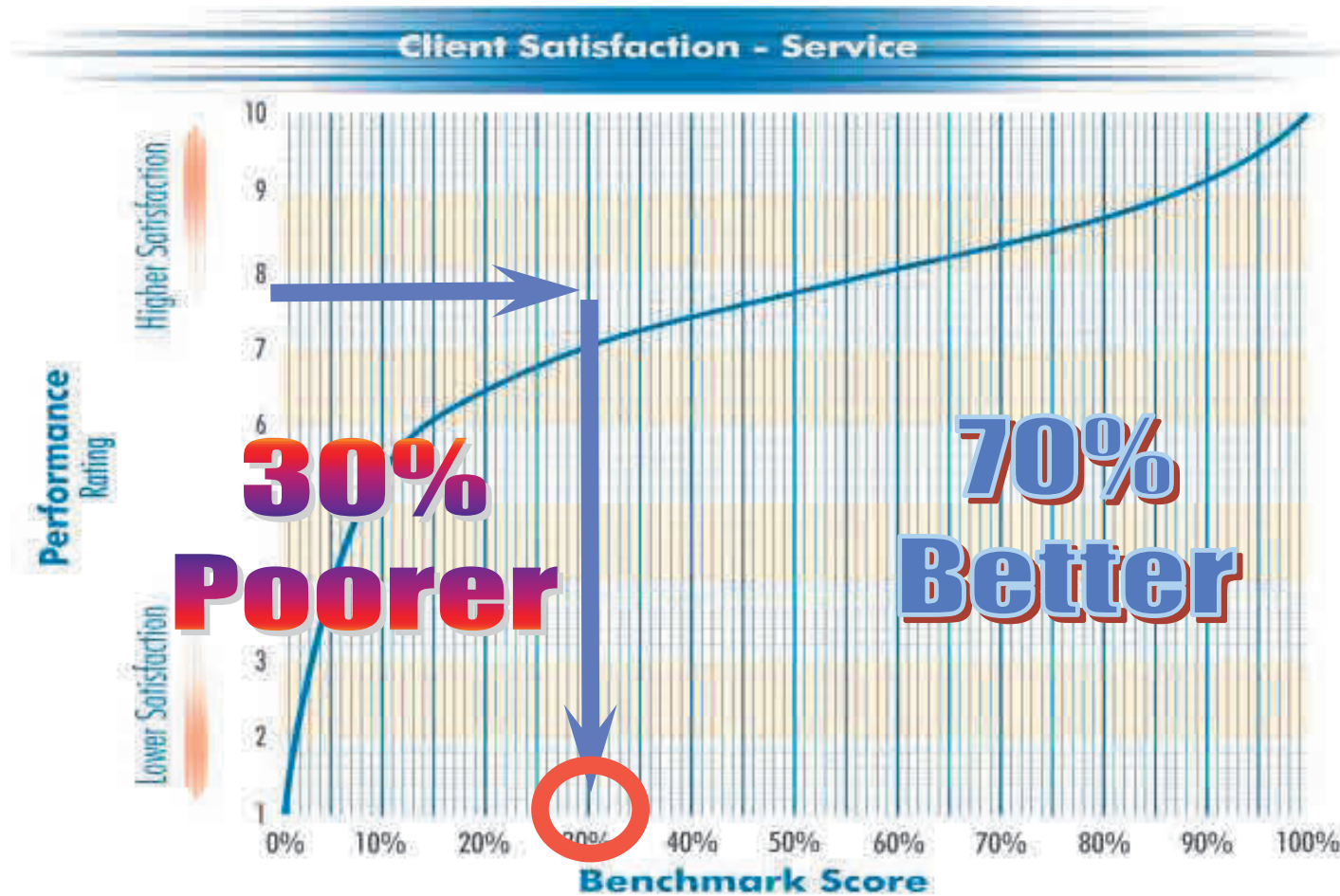
Focus   - on 10 critical issues

Project KPIs

– Client satisfaction - product

– Client satisfaction - service

– Defects

– Predictability - cost

– Predictability - time
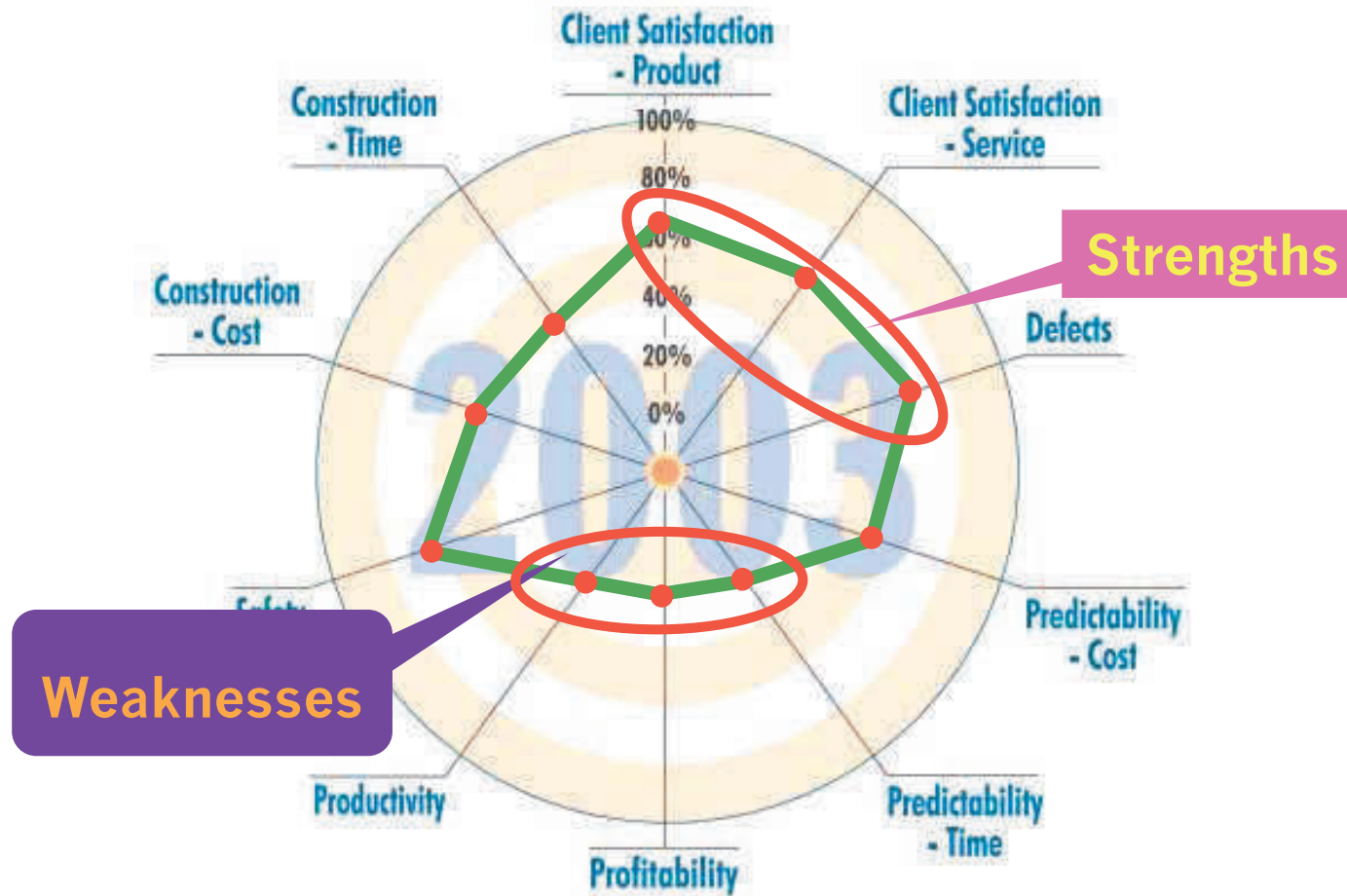
– Construction cost

– Construction time

Company KPIs

– Safety
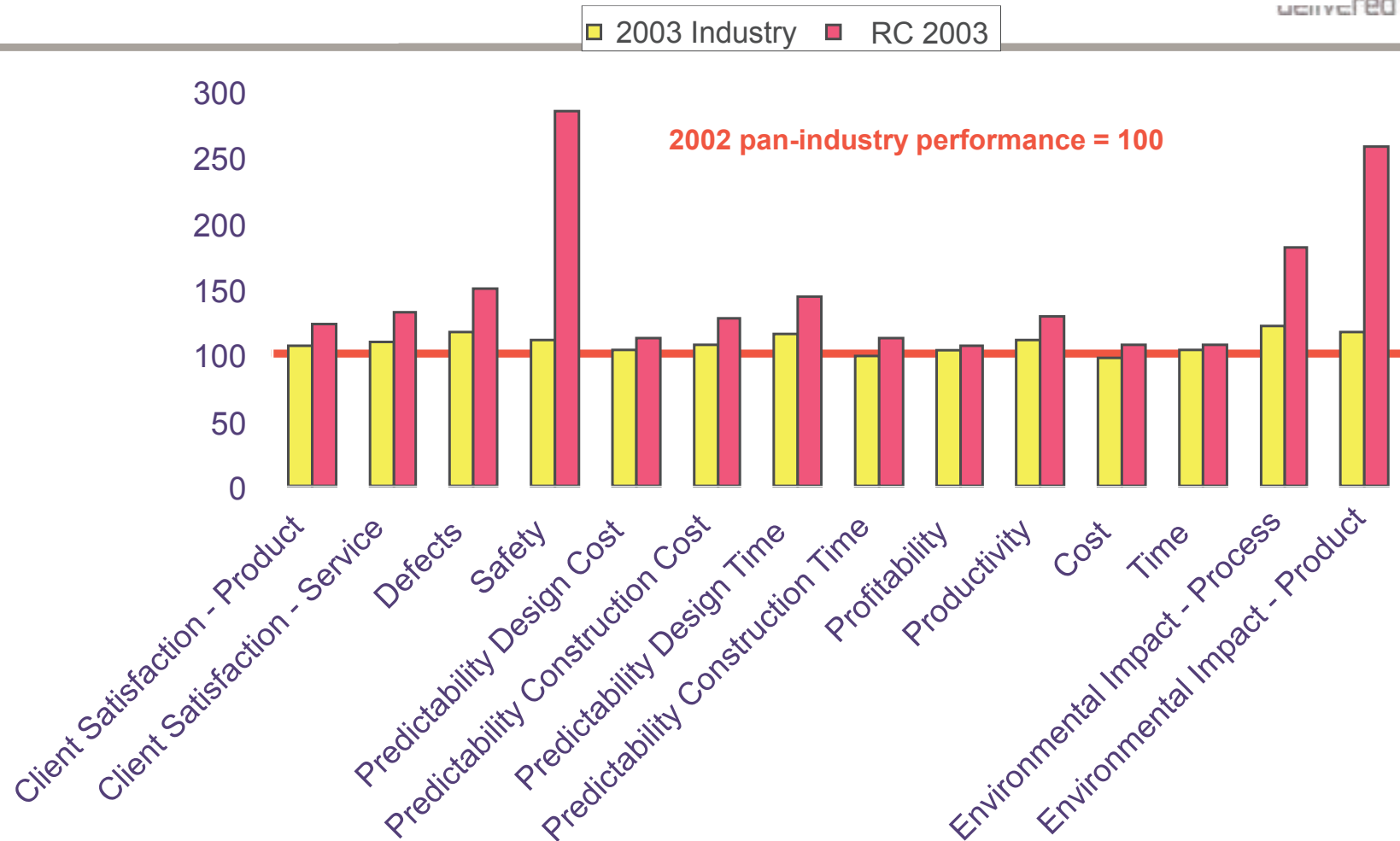
– Productivity

– Profitability

Simple benchmarking

Balanced performance scorecard

Demonstration project performance

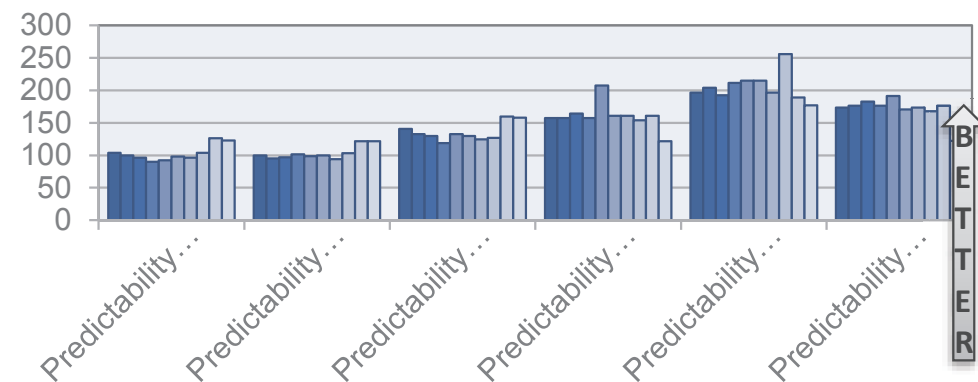# Monitoring Industry Progress

Client Satisfaction - Product
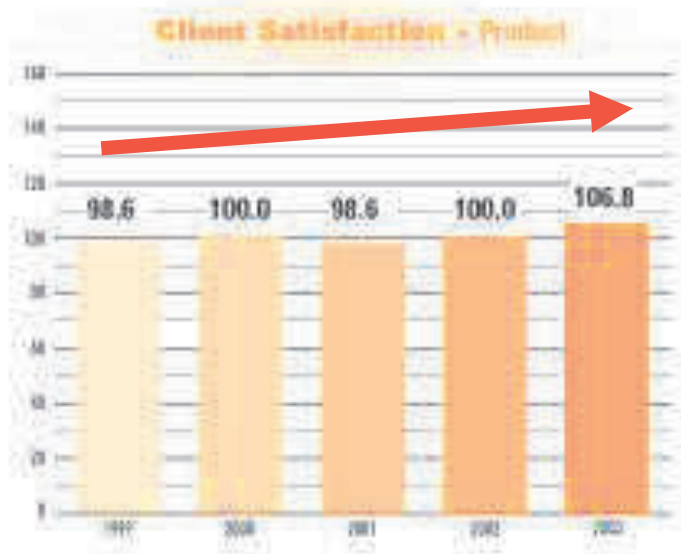
Scoring 8/10 or better
72%   73%   72%   73%   78%

Client Satisfaction - Service

Scoring 8/10 or better
58%   63%   63%   65%   71%

CONSTRUCTING EXCELLENCE
delivered with bre
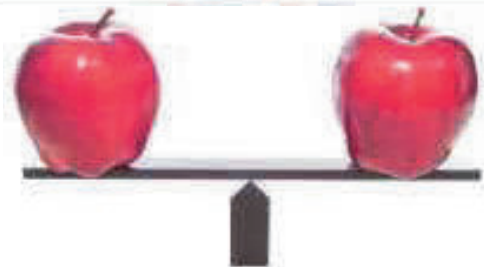
Safety is 75% better than 2 decades ago - but has it plateaued?

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Safety

Safety - Industry Accident Incident Rate (AIR)

Year	AIR
1999	1354
2000	1271
2001	1318
2002	1217
2003	1143
2004	1162
2005	1080
2006	765
2007	735
2008	681
2009	701
2010	613
2011	578
2012	537
2013/14	486
2015	415
2016	424
2017	400
2018	399
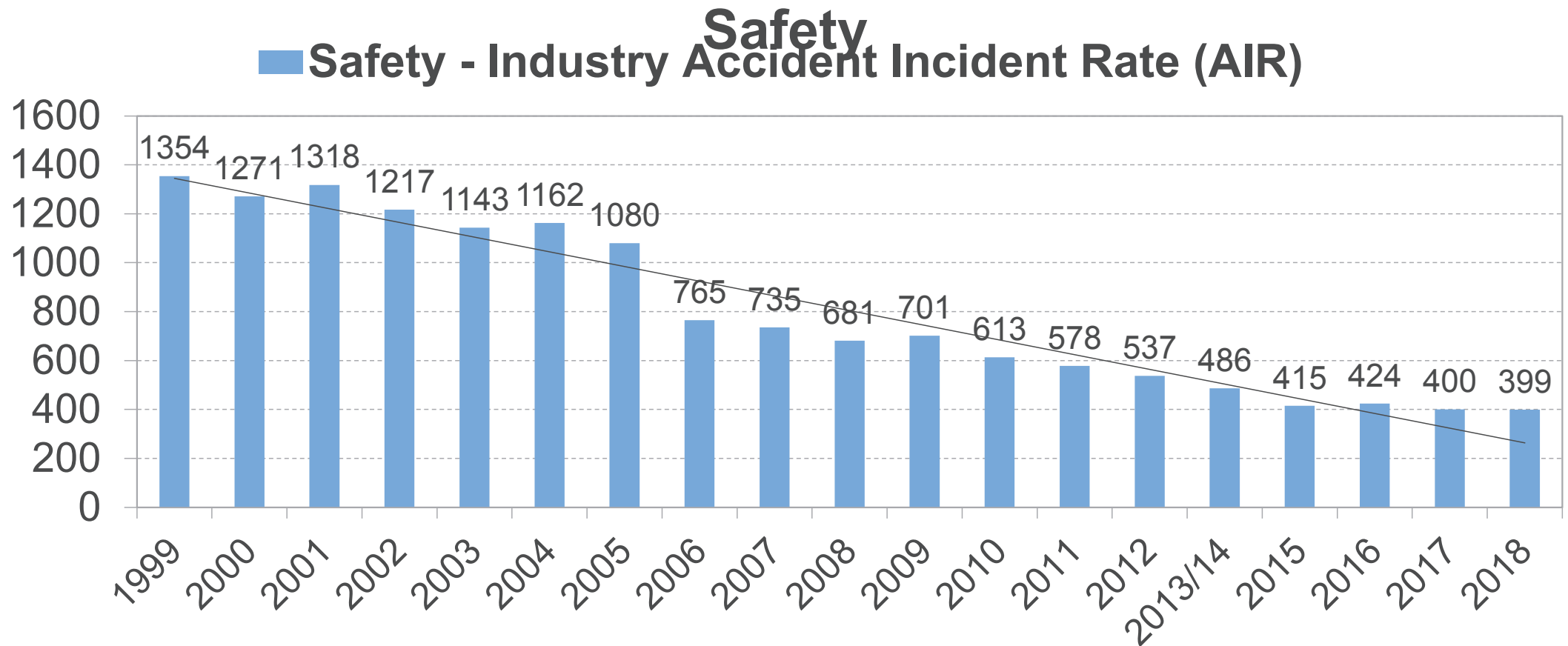
Cost predictability has risen from 50% to 66% over 2 decades – but has it pleateau-ed?

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Cost predictability
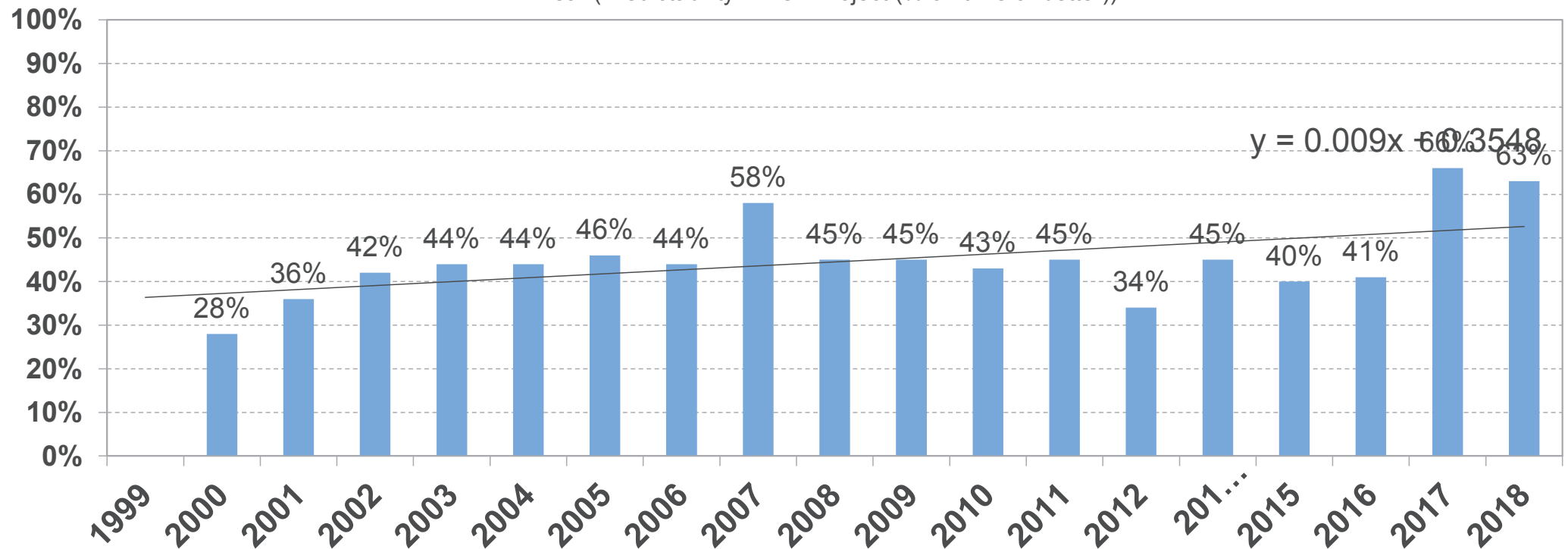
■ Predictability Cost - Project (% on cost or better)
— Linear (Predictability Cost - Project (% on cost or better))

$y = 0.0142x + 0.404$
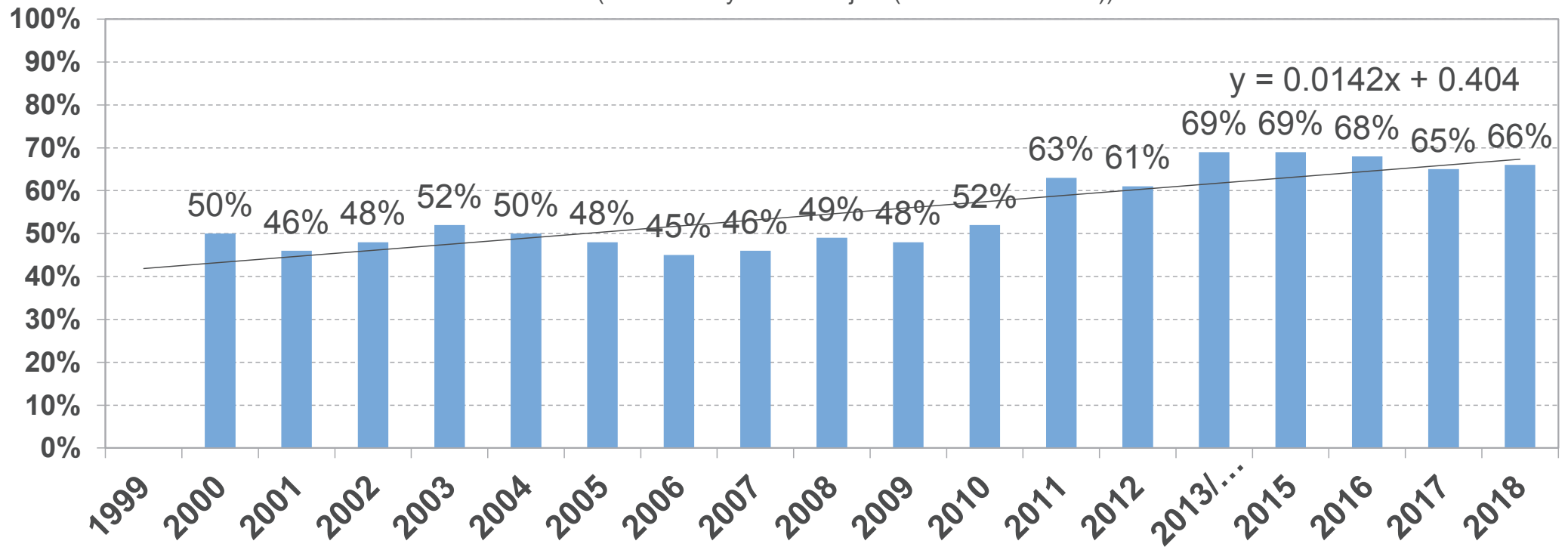
Time predictability has improved by 50% in the last 2 years compared with the previous 15 years?

As non-housing got better, housing got progressively worse - until this year, can it close the gap?

Client Satisfaction - Defects - Impact at Handover
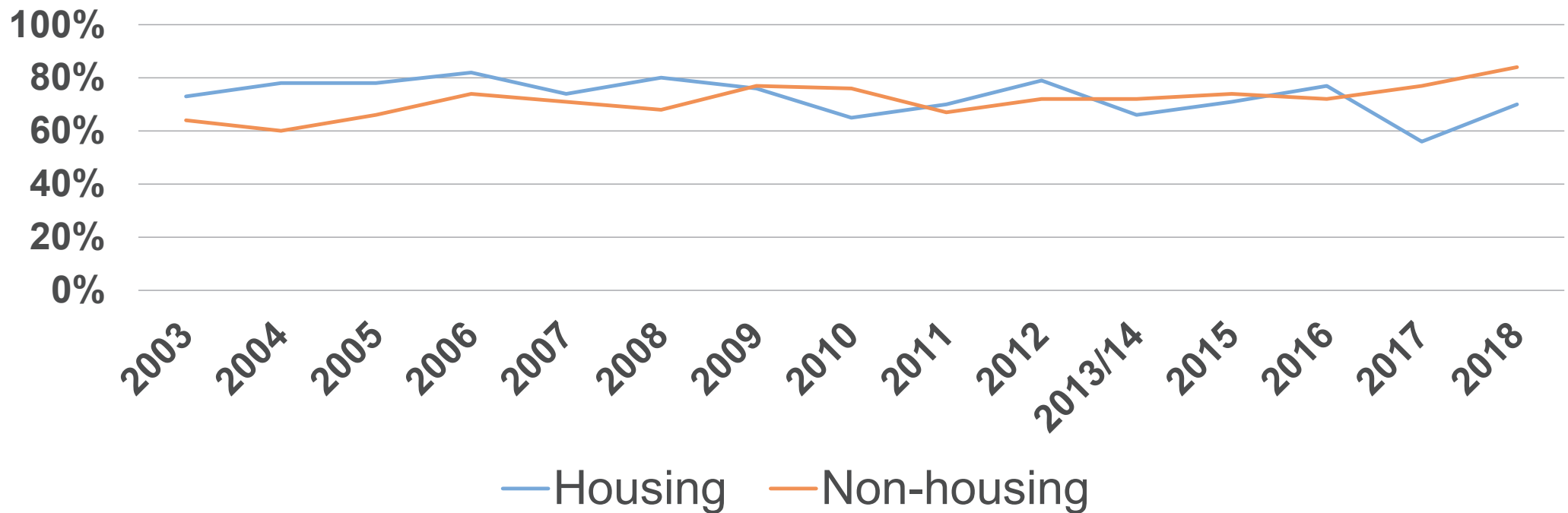
Data form BRE SmartSite shows waste to landfill has reduced dramatically

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Construction waste

■ Median waste removed from site m3/£100K project…

$y = -4.0154x + 67.83$

Year	Value
2003	65.5
2004	67.0
2005	55.6
2006	47.4
2007	46.8
2008	41.9
2009	39.6
2010	36.5
2011	27.9
2012	20.9
2013/14	22.8
2015	21
2016	18.3
2017	16.8
2018	

Our data shows productivity has improved over the past two decades…

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Productivity

◼ Productivity (constant 2015 values)　　　—— Linear (Productivity (constant 2015 values))

$y = 1.8624x + 33.461$

Values shown (left to right): 42.5, 41.9, 39.8, 41.8, 41.2, 41.5, 49.0, 50.3, 51.7, 49.9, 51.5, 61.2, 64.7, 64.2, 64.1, 65.0, 63.7, 70.3
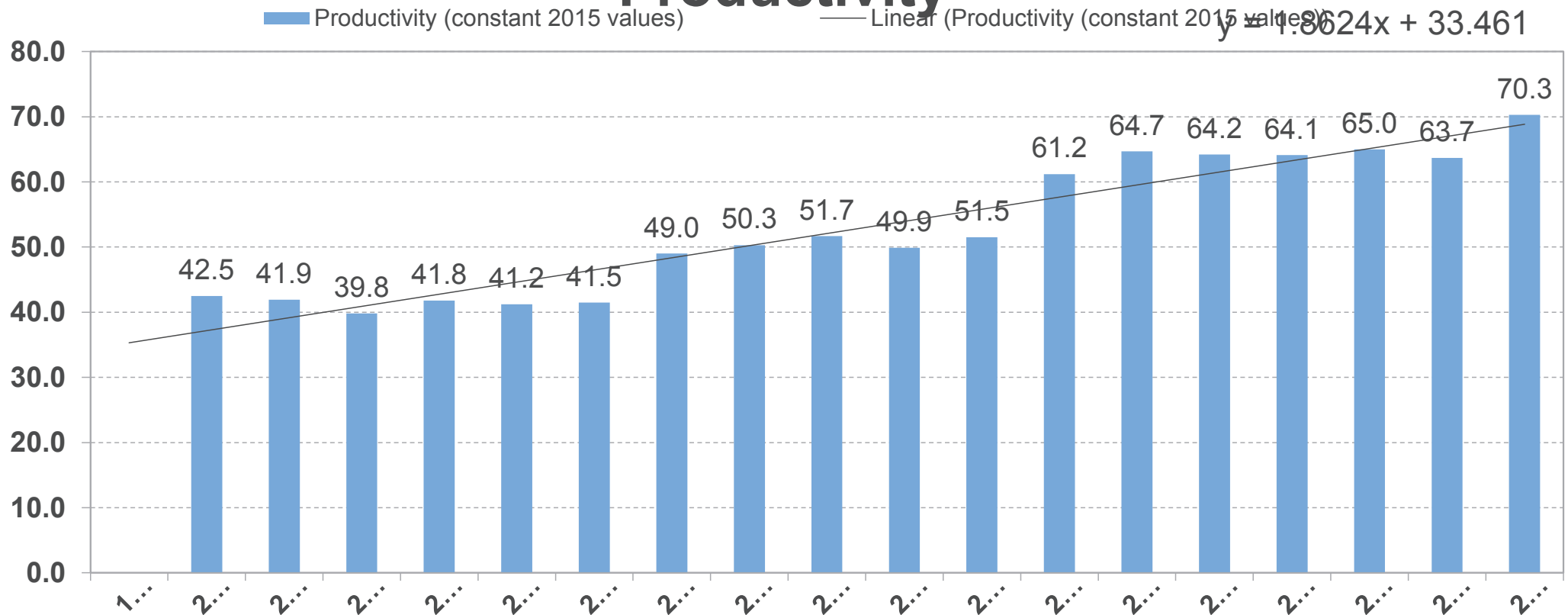
Profitability remains poor, transformative business models are required

Profitability

- Profitability – Industry median profit before interest and tax (PBIT)
- Linear (Profitability – Industry median profit before interest and tax (PBIT))

$y = -0.0023x + 0.0794$

Year	Value
2000	4.4%
2001	5.1%
2002	5.2%
2003	5.4%
2004	7.0%
2005	8.1%
2006	7.9%
2007	8.2%
2008	9.6%
2009	9.9%
2010	7.7%
2011	5.0%
2012	2.7%
2013…	2.1%
2015	2.8%
2016	2.5%
2017	2.7%
2018	2.8%
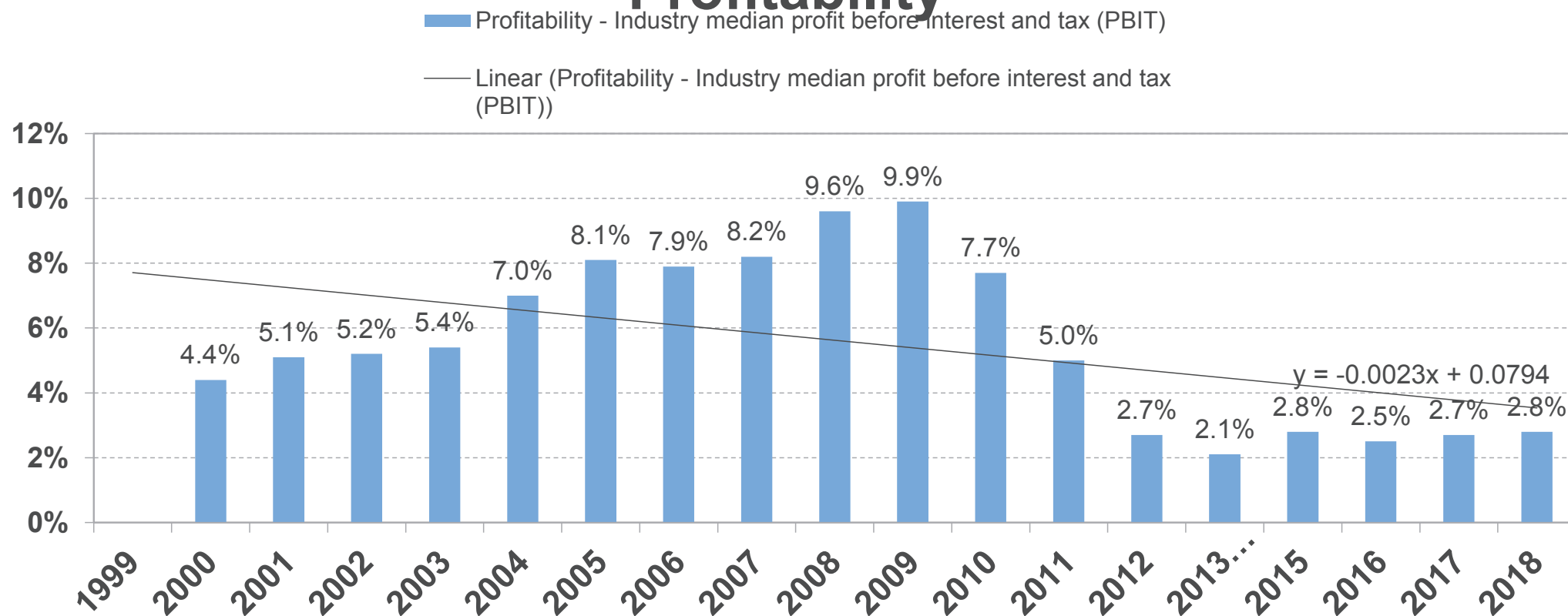
Our new SmartSite KPIs portal and plans for future development

Colm Quinn, Constructing Excellence

New benchmarking portal – SmartSite KPIs

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Company home   Logout

Company Home

> Projects

> Users

> KPI Reports

> Company Details

> Company Data

Logout

SmartSite KPIs - Sodor Railway > Homepage

| Upload projects | Upload project data | Upload benchmarks |

Projects

Project Name	Project Type	Region	Start Date	Completion Date	Data	KPIs
pop	Education	East of England	1/3/2018	12/2/2186	👁	👁
testxyz	Education	East of England	1/3/2018	30/7/2018	👁	👁
Upload test 1	Education	East of England	1/1/2018	1/3/2018	👁	👁
Upload test 2	Healthcare	East Midlands	1/2/2018	1/3/2018	👁	👁

Add Project

SMARTSITE

Company home   Logout

Company Home
> Projects
> Users
> KPI Reports
> Company Details
> Company Data
Logout

Smartsite KPIs > Company Performance Data

Company Performance Data

Year 2016 ⬍

Number of reportable accidents in the year	
Average number employed in the year	1158
Value of sales (£000s)	500.00
Total value of sub-contracted services (£000s)	200.0
Total value of goods supplied (£000s)	100.0
Number of full-time equivalent employees	0.0
Profit before interest and tax last year	5555.0
Value of sales last year	455.0
Number of direct employees who have left and been replaced in the last year	51.0

Average number of direct employees in the last year	47.0
Total number of working days lost due to sickness among direct employees in the last year	45.0
Total number of usual hours worked each week by all direct employees	45.0
Number of direct employees	456.0
Number of direct employees qualified to NVQ Level 2 or higher	456.0
Total number of training days provided in the last year	45.0
Number of direct employees who are covered by HR commitment and recognition	456.0

Edit   Add data for another year

SMARTSITE

Company Home
> Projects
> Users
> KPI Reports
> Company Details
> Company Data
Logout

Upload Projects

Follow the steps below to bulk upload project data.

Always download and use a new blank form each time you make a bulk upload

Step 1: Download blank form and instructions

Excel format – Bulk upload project data form with dropdown lists
Download excel blank form

Step 2: Upload completed bulk project data form

Use the

Choose f

	Project Name*	Project Type*	Region*	Customer	Project Value*	Contract Type	Size/number of units	Procurement Type	Location
1	KPI DATA HUB TOOL - Upload Projects								
2									
3									
5	Upload test 1	Education	East of England	Tesco	50000	Bespoke		Alliance	
6	Upload test 2	Healthcare	East Midlands	Sainsburys	40000	JCT		Construction management	
7	Upload test 3	Healthcare	London	Morrisons	60000	NEC		Design and build	
8									
9									

SMARTSITE
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Company Home

Project

> Project Details

> Project Performance Data

> Project KPI Report

Logout

Smartsite KPIs > KPI Reports

Project KPI Report : pop

Dataset to benchmark against   2018 ↕

Select the KPIs you wish to include in this report.

☐ **Select All**

☑ Client Satisfaction - Service ⓘ
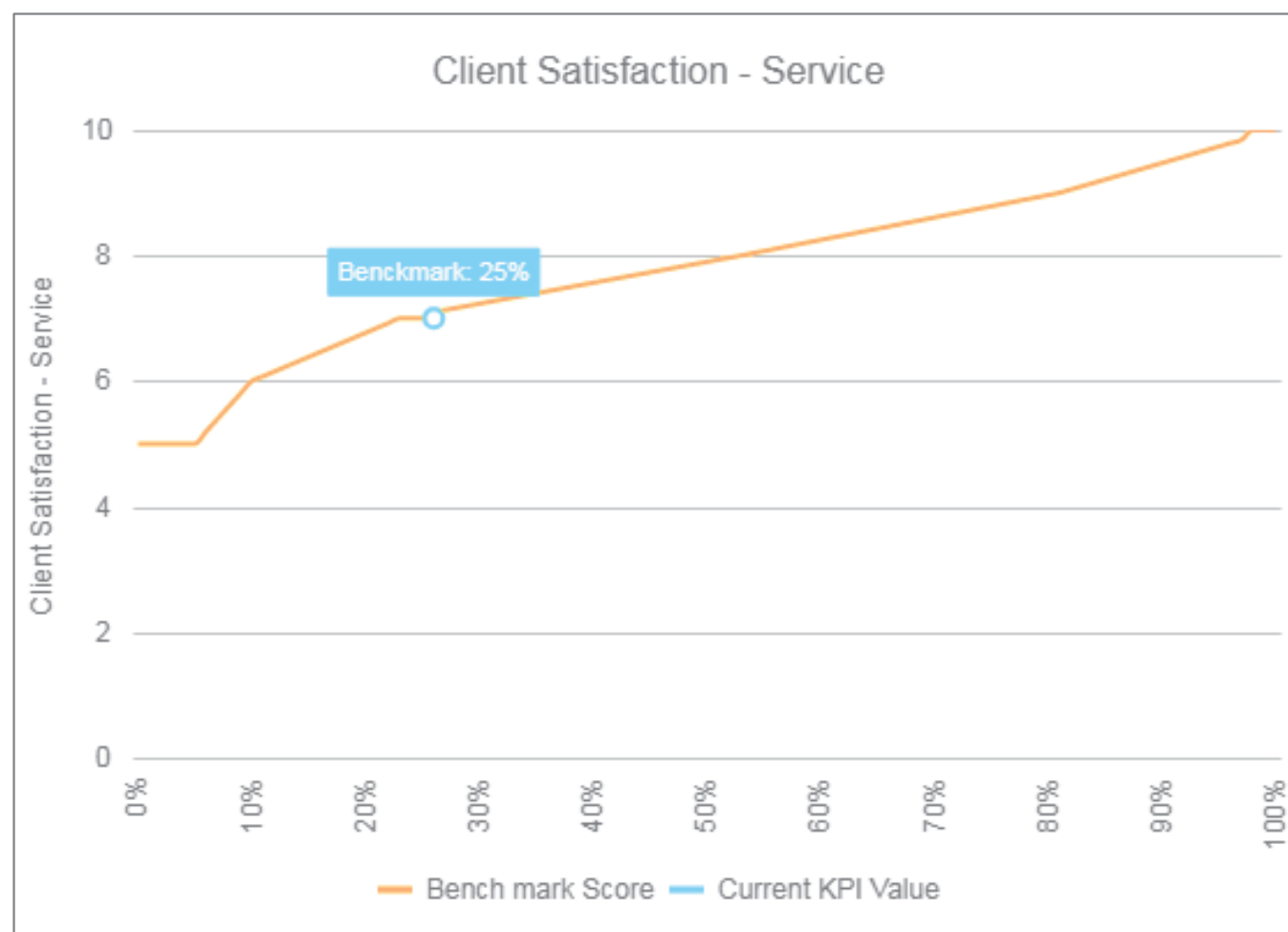
☑ Client Satisfaction - Value for Money ⓘ

☐ Client Satisfaction-Product ⓘ
☐ Variance Time - Design ⓘ

☐ Variance Time - Project ⓘ

☐ Waste (Total amount) - Construction Process ⓘ

[Run report]

Priorities for 2019

- **<u>Please test and give us your feedback</u>** – ask me to set up account

- **Immediate** - What bugs/useability issues need sorting

- **Immeditate** – is this data easy for you to provide?

- **Short term** - What are the "must haves" in terms of functionaliy?
  E.g. new reports, updated fields etc

- **Medium term** – Priorities for more significant development to the tool, and the KPIs themselves (to be answered in workshop)

building a better world together