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Industry Perspectives: Case Studies in Performance Measurement

Construction Key Performance Indicators Launch 2012
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Presentation Agenda

Case Study 1. Contractor Performance Measurement Examples

- KPIZone
- KPI Engine
- Bespoke Systems

Case Study 2. Contractor Benchmarking Club Example

- Health and Safety Benchmarking

Case Study 3. Client Benchmarking Examples

- National Frameworks
- Regional Frameworks
- Housing Programme

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Case Study 1: Contractor Performance Measurement

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The KPI Zone

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www.kpiengine.com KPIzone

Home | About | KPI Engine | KPIzone | Carbon

Login KPIs SPIs Indicator Search Legacy Data

Key Performance Indicator (KPI) Groups

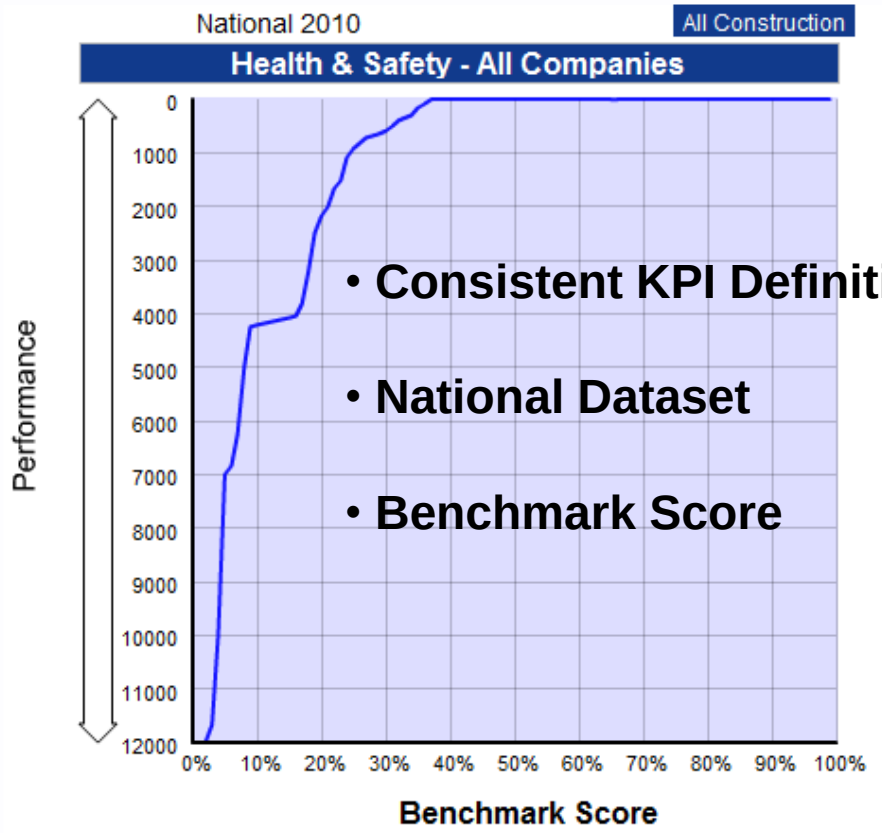
Headline KPIs (All Construction)	Respect for People (Social)	Economic	Environment	
Sector KPIs (Non-Housing Economic)	Infrastructure	New Build Non-Housing	R & M & Refurb Non-Housing	
Sector KPIs (Housing Economic)	Repairs Housing	New Build Housing	R & M & Refurb Housing	Voids Housing
Specialist KPIs	M & E Contractors	Consultants	Construction Products	

Choose the KPI Group by clicking on the relevant sector picture. This will take you to the KPI records for that group.

Performance

KPI	Score	Range		National %
Health & Safety - All Companies	1250	0 - 12000	Compare	24%

Find Out More...



- **Consistent KPI Definitions**
- **National Dataset**
- **Benchmark Score**

Health & Safety - All Companies

Description

Reportable accidents per 100,000 employed by the company per year – the Accident Incidence Rate (AIR).

Reportable accidents are defined by HSE as fatalities, major injuries, and over 3 day accidents to employees, self-employed & members of the public.

Purpose

To measure a companys safety performance. (For use by companies of any size).

Calculation

((Number of Reportable Accidents in the year)/(Full Time Equivalent Employees including Self-employed and Sub-Contractors))* 100,000...

Number of reportable accidents in the year 2

Average number employed in the year 160

Calculate

Method Of Measurement

1
For use by companies of any size.

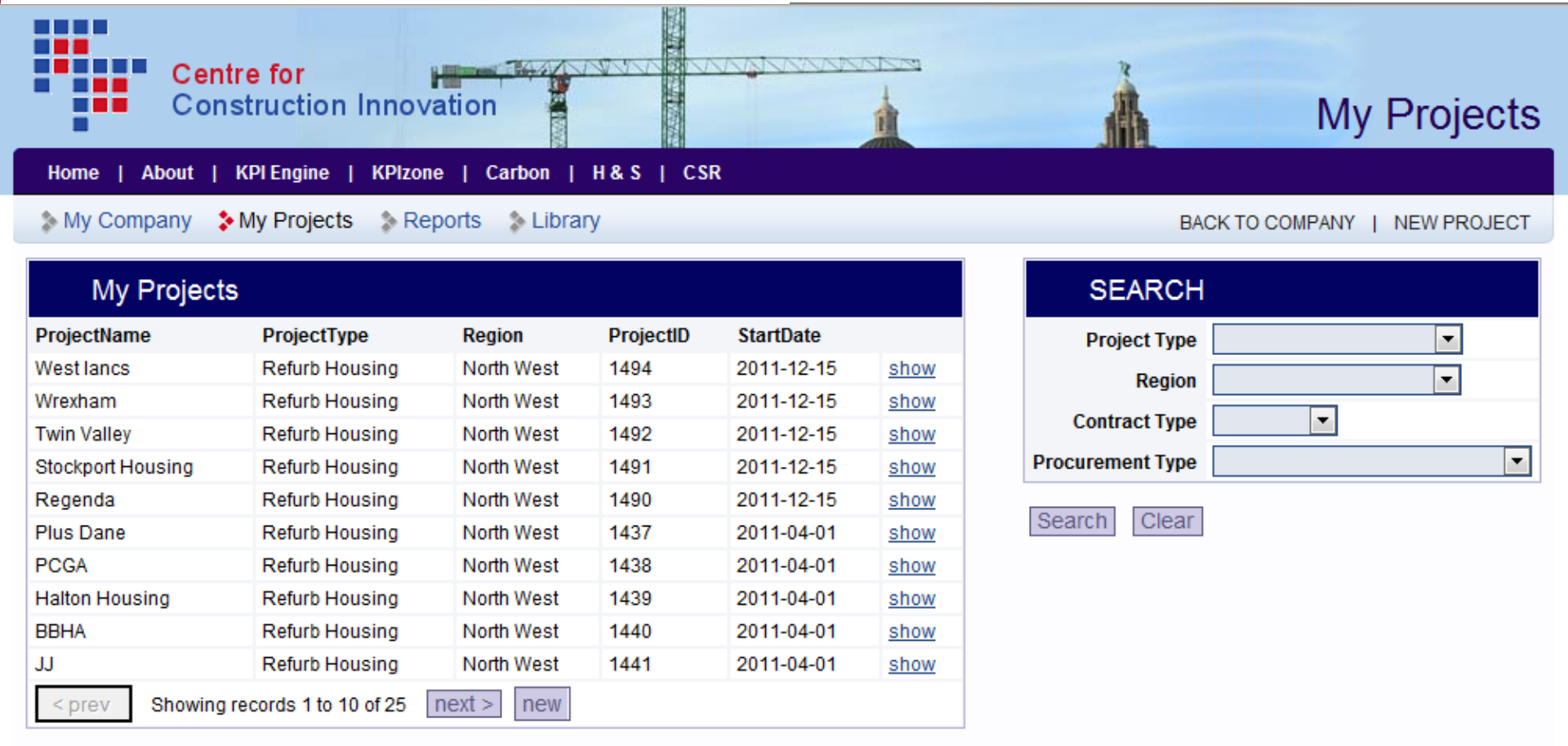
Collect the following data for the company for a complete year:
- the number of reportable accidents. On a properly managed site, details of all accidents will be recorded in the accident book
- the average number employed by the company, including self-employed and sub-contractors.

2
Calculate the Safety performance using the formula:
Performance (AIR) safety = (Number of reportable accidents in the year / Average number employed in the year including self-employed and sub-contractors) x 100,000

The KPI Engine

www.kpiengine.com

- Submit and store project and company data
- Calculate KPI scores against the suite of standard industry or bespoke KPIs
- Report company or project level performance over time
- Benchmark performance across projects and against industry dataset
- Use the repository of data accumulated to monitor and drive continuous improvement



KPI Data Entry

Performance

KPI	Score	Range	Updated		
Carbon per £100000 project turnover - process only	3618.76	0 - 30000	✓		info >>
Contractor Satisfaction	9.0	1 - 10	✓		info >>
Local Labour		0 - 100	✗		info >>
Supply Chain Satisfaction	7.1	0 - 10	✓		info >>
Client Satisfaction - Product	8.2	1 - 10	✓		info >>
Client Satisfaction - Service	9.20	1 - 10	✓		info >>
Fair Payment - Main Contractor	-50.00	-100 - 300	✓		info >>
Predictability Cost Exc Client Changes Construct	0.0	-30 - 100	✓		info >>
Predictability Time Excl Client Changes Const	0.0	-30 - 100	✓		info >>
Predictability Time Excl Client Changes Design	0.0	-30 - 100	✓		info >>
Apprenticeship weeks per £100000 project value	3.84	0-100	✓		info >>
WST-Waste Diverted from Landfill tonnes £100k NBNH	3.7	0-250	✓		info >>
WST-Waste Diverted from Landfill (ton) £100k RNH		0-50	✗		info >>
Waste from site - Construction Process only	20.3	0 - 500	✓		info >>

Submit Cancel

Find Out More...

Project Details

Local Labour

Description

This measures the local workforce engaged on a project as a percentage of the total workforce. The definition of local should be closely defined in collaboration with the client at the start of the project.

Purpose

Calculation

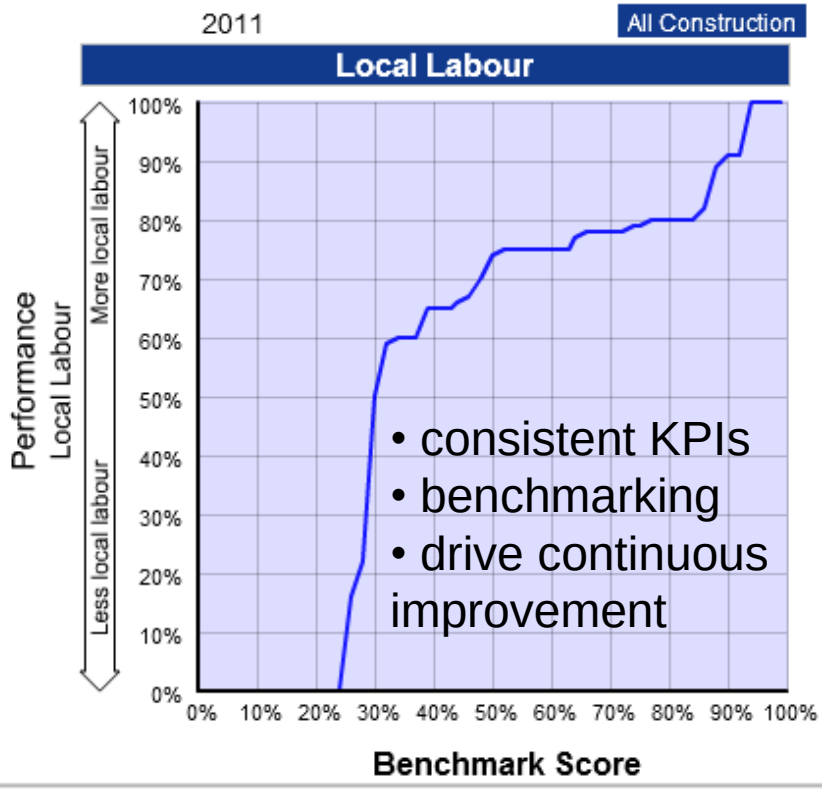
(Local Workforce / Total Workforce) * 100...

Number of workforce defined as local

Total Number of Project workforce

Calculate

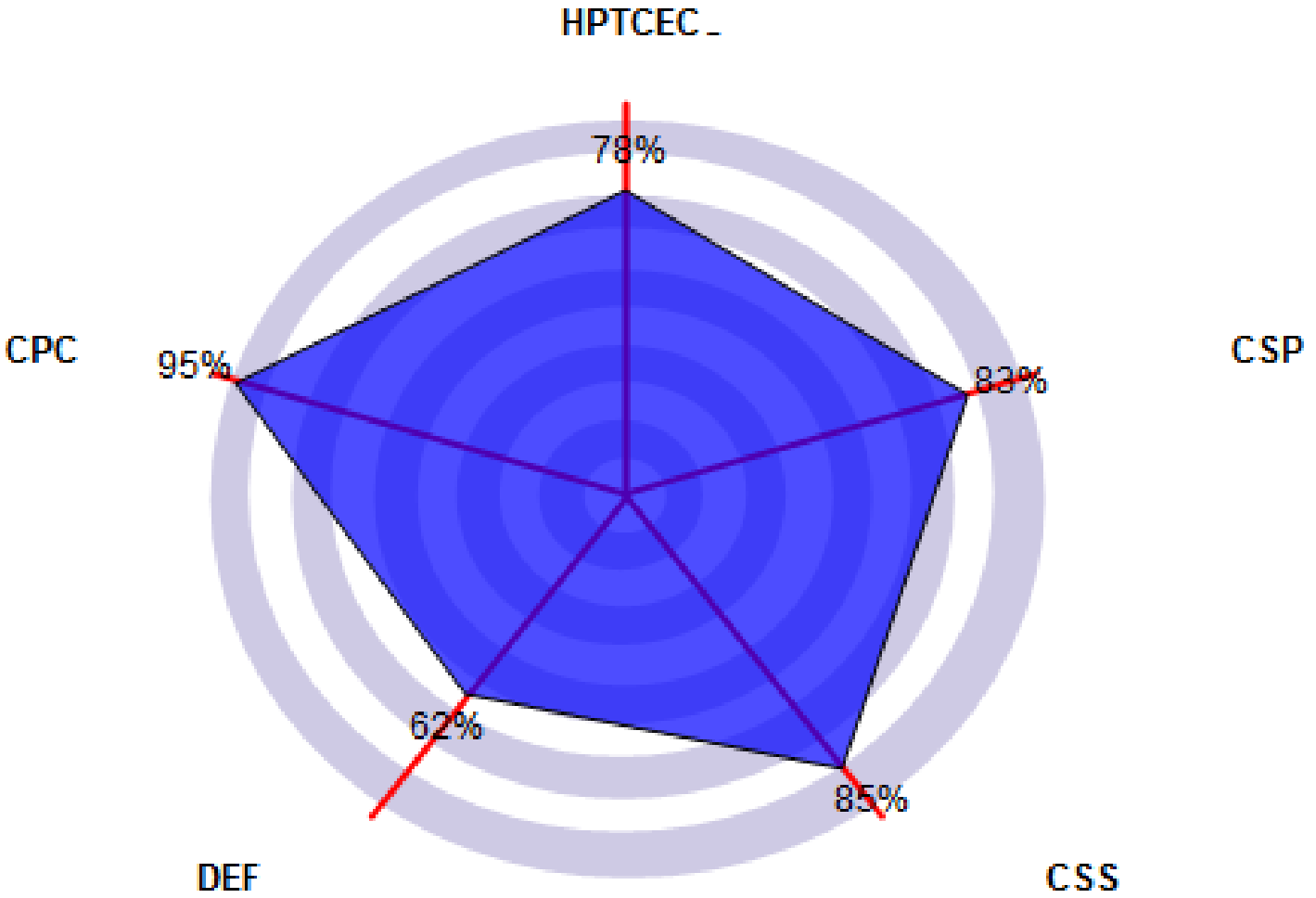
Graph



KPI Engine Reporting

Performance Report

Project X against National 2011



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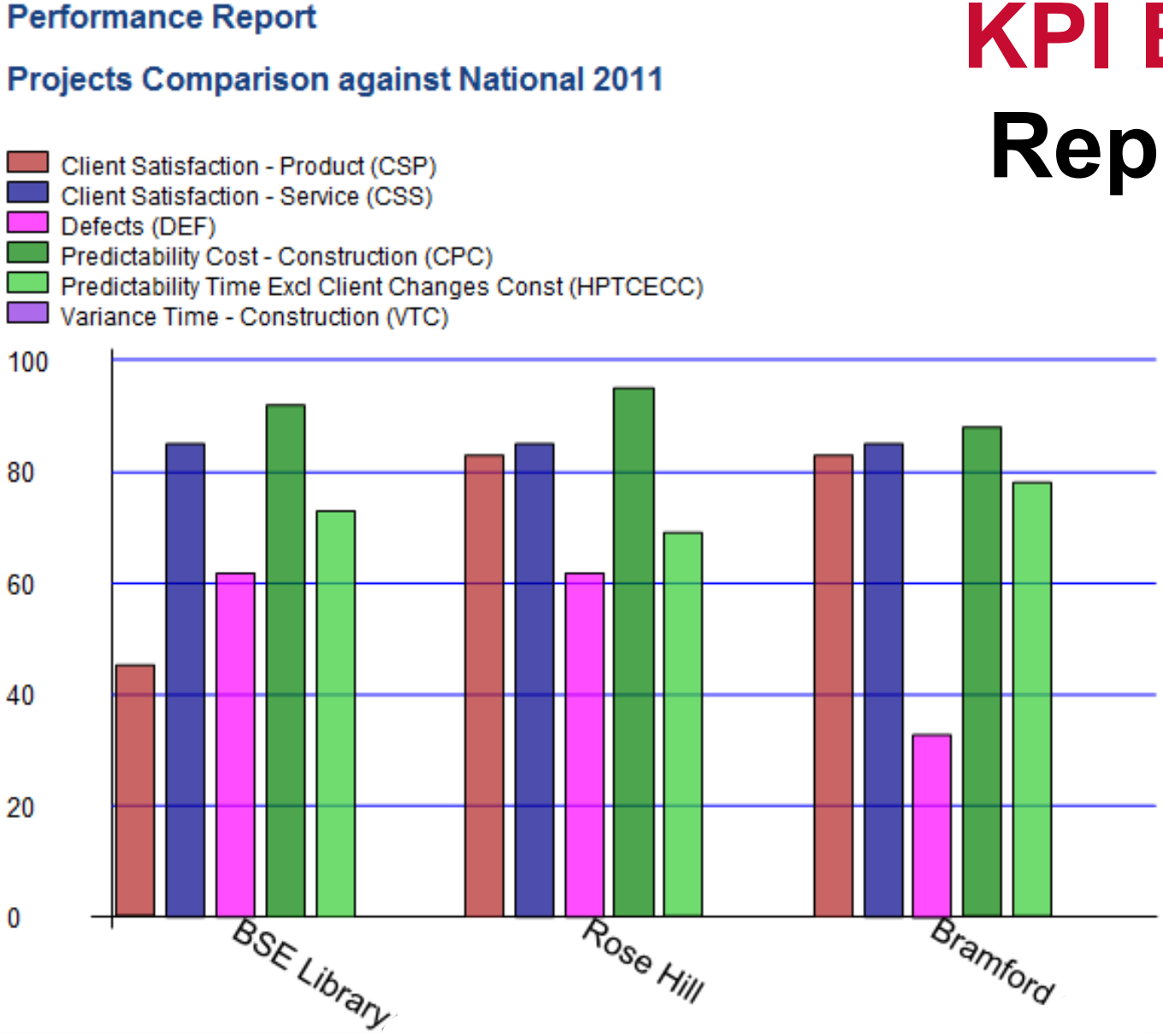
KPI Engine
Reporting



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Bespoke Internal KPI PMS

Internal Performance Management System using bespoke KPIs to benchmark regional offices and business units

- Forecasted Profit %
- Forecasted Profit £s
- Cash Collection
- Team Cost
- Completions on Time
- Tender Success Rate
- Client Satisfaction Overall
- Considerate Constructors Scheme
- Health and Safety Non-Reportable Accidents
- Health and Safety Score

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Case Study 2:
Health & Safety Benchmarking

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UKCG H&S Members

The UK Contractors Group is the primary association for contractors in the UK.

Mission to promote the industry and to support its members in delivering excellence

- Balfour Beatty
- BAM Construct UK
- Bouygues
- Carillion plc
- Clegg Group
- Clugston Construction Ltd
- Costain Group plc
- D+R Scaffold Group
- Galliford Try plc
- Harsco Infrastructure
- Interserve plc
- ISG
- Keepmoat plc
- Kier Group
- Leadbitter
- Lend Lease
- Mace
- Midas Group Ltd
- Miller Group Ltd
- Morgan Sindall plc
- M + W Group
- Osborne
- Seddon Group Ltd
- Severfield-Rowen Plc
- Shepherd Construction Ltd
- John Sisk & Son Ltd
- Sir Robert McAlpine Ltd
- Skanska UK plc
- VINCI PLC
- Volker Wessels UK
- Wates Group Ltd
- Willmott Dixon Holdings Ltd

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UKCG H&S

UKCG member companies require that everybody engaged on their construction sites is able to demonstrate they have the necessary health and safety knowledge and skills.

The aim of the UKCG Qualifying the Workforce Survey census (4th Oct 2012) is to calculate the percentage of those working on UKCG sites carrying correct competence cards and with appropriate training.

The key benefits are:

- Helping members understand the competence card compliance of their workforces.
- Helping members understand the health and safety training of their workforces.
- Provide feedback to members on the current competence card compliance “picture” across their sites, and how they compare to other firms

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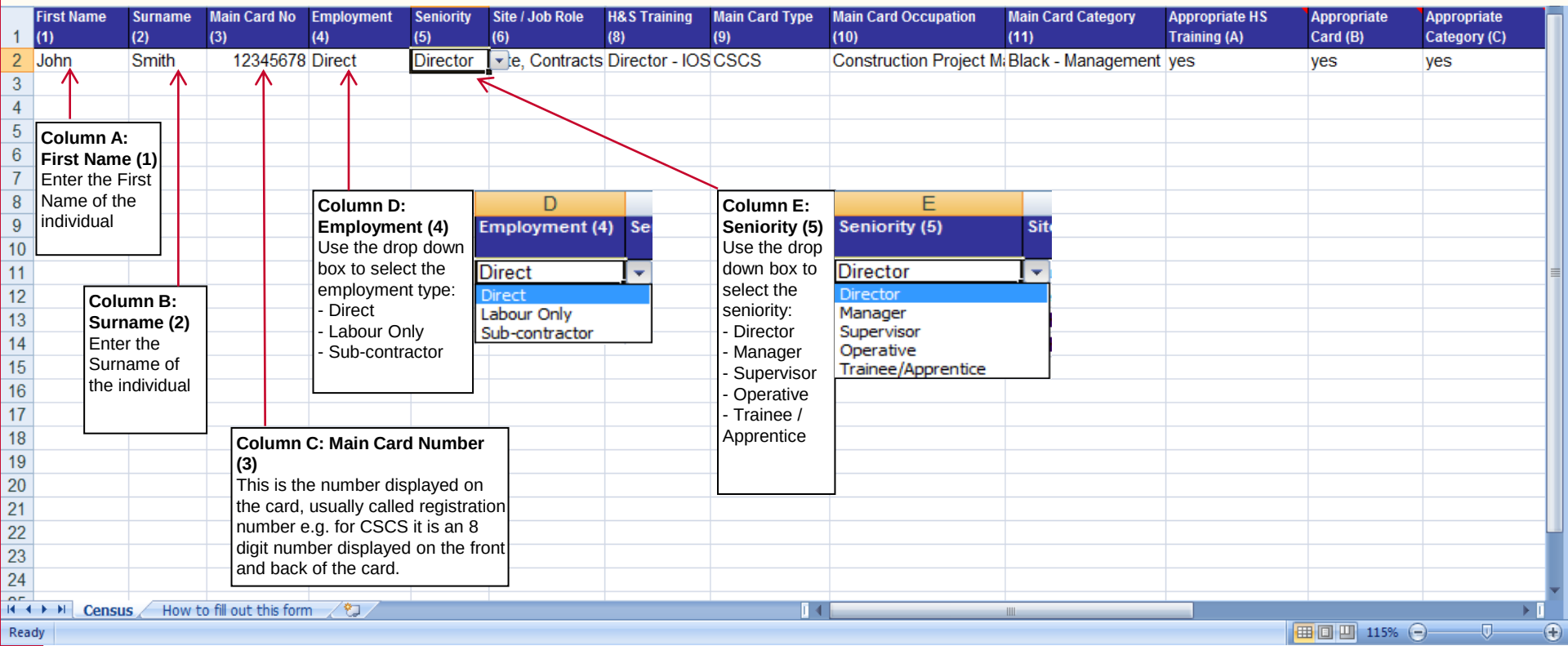
Data Collection Spreadsheet

- Name
- Card ID
- Employment Type (Direct, Labour Only, Sub-contract)
- Seniority (Director, Manager, Supervisor, Operative, Trainee/Apprentice)
- Site Job Role (30 Major Categories)
- H&S Training
- Main Card Type (Brand), Main Card Occupation (1200), Main Card Category (Colour)
- Appropriate Training, Appropriate Card, Appropriate Category



H&S Reporting

UKCG

QWF Submission

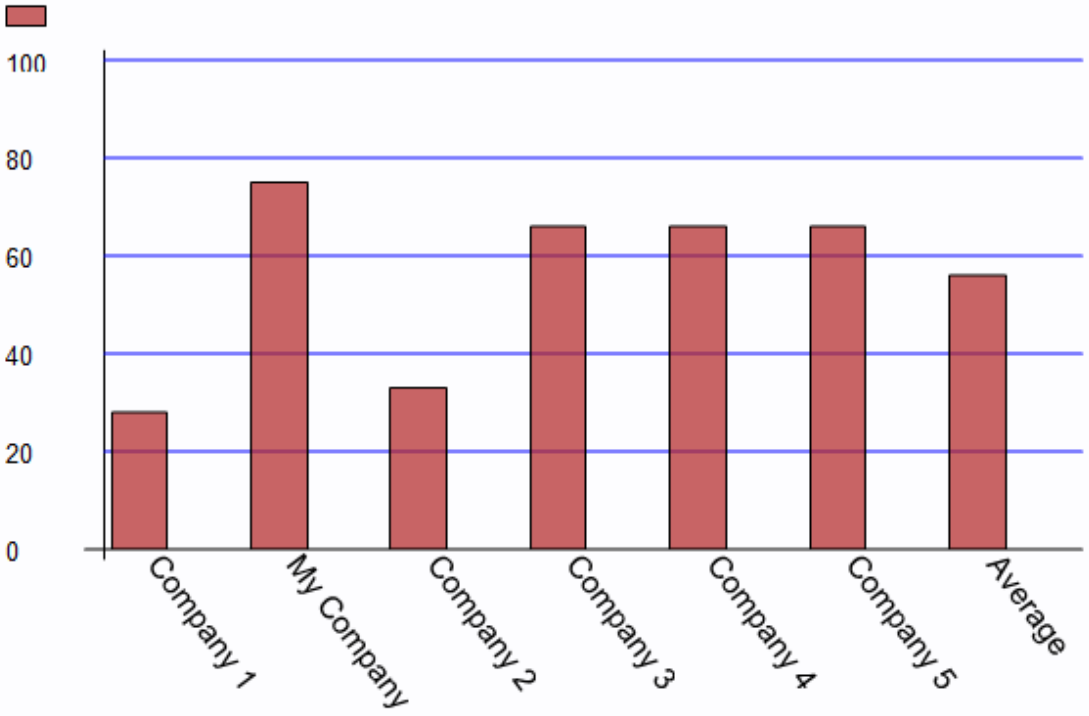
Home | About | KPI Engine | KPIzone | Carbon | H & S | CSR

QWF Submissions

SUBMISSION HOME | NEW REPORT

QWF Submission Report

% Appropriate HS Training for Consultant, designer, planners, H&S advisers etc.;Direct;Manager;



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H&S AIR Benchmarking

- Number of fatal Injuries
- Number of major accidents
- Number of >3 day accidents
- Number of dangerous occurrences
- Number of reportable diseases
- Injuries to members of the public
- HSE Inspections undertaken
- Prohibition notices issued
- Improvement notices issued
- HSE Invited Visits

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Case Study 3: Client Performance Measurement

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Ministry of Justice KPIs

- Client Satisfaction - Product
- Client Satisfaction - Service (Main Contractor)
- Client Satisfaction - Value for Money
- Client Satisfaction - Quality of O & M Manual
- Client Satisfaction - Quality Plan
- Defects
- Safety AIR Project
- Waste – Construction Process
- Energy Use (Designed) – Product
- Area of Created/Retained Habitat
- Impact on Biodiversity – Process
- Mains Water Use – Process
- Impact on Environment – (Process & Product)

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Dept of Health ProCure21+ KPIs

- Predictability Time (%)
- Predictability Cost (%)
- Safety (% achieving zero accident incident rate
- Defects at handover
- Client Satisfaction Service
- Client Satisfaction Products

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Environment Agency KPIs

- Cost predictability (%)
- Time predictability (%)
- Reuse of materials (%)
- Waste to landfill (%)
- Accident Frequency Rate
- Pollution Incidents (Category 1, 2 / Category 3 & near misses
- Houses Protected (OM2)
- BAP Habitat Creation (hectares)
- Efficiency Savings (£M / % of programme)

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North West Construction Hub – Regional Framework KPIs

- Predictability Cost Exc Client Changes Construct
- Predictability Time Excl Client Changes Const
- Predictability Time Excl Client Changes Design
- Client Satisfaction - Product
- Client Satisfaction - Service
- Contractor Satisfaction
- Supply Chain Satisfaction
- Fair Payment - Main Contractor
- Local Labour
- Apprenticeship weeks per £100000 project value
- Waste Diverted from Landfill tonnes £100k
- Waste from site - Construction Process only
- Carbon per £100000 project turnover - site level

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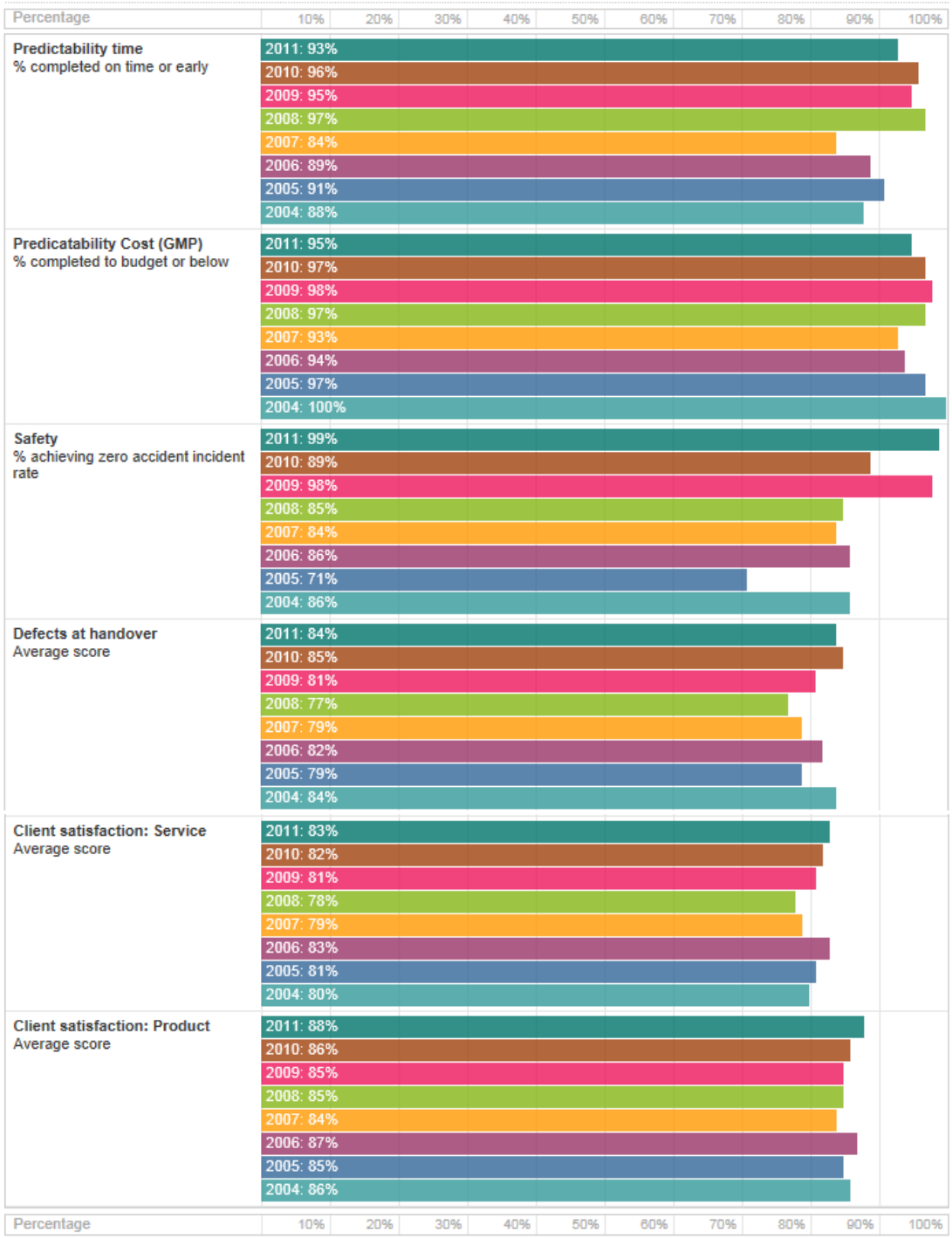
Social Housing Procurement Group

1. Defects
2. Resident Satisfaction Product
3. Resident Satisfaction Service
4. % of resident satisfaction surveys returned
5. Formal complaints received
6. Variance Construction Cost
7. Variance Construction Time (weeks)
8. Variance install period per property (days)
9. Total variations
10. Properties changes from the original list
11. Non accesses
12. % of deliveries received in full
13. % of damaged products
14. Project Health and Safety
15. Environmental – Percentage waste to landfill



Example of Performance Measurement Use:

P21+ Framework Year on Year Performance Figures

http://www.procure21plus.nhs.uk/performance/

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CCI Learning...

Performance Measurement systems are easy to design – data can be hard to collect

Don’t be too ambitious in the beginning – start off small and then build up

Performance measurement is wasteful – only action gives value to PM – if data is not acted on is it the right data?

IT can help us manage data – but the experience and knowledge of people is still required

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