Poor Lighting = Poor Performance
Construction costs of a building

Good to focus on saving purchase & install cost
Maintenance and operating costs over the years

Good to focus on saving on maintenance through life
Business operating costs of people working in that building

But the big expense is still staff costs at 90% of a building operating costs
It is still clear that getting the best out of your staff is paramount if you want to get value for those expenses.
People are the expensive yet most valuable asset for a company…
“If the person who works at your company is 100 percent proud of the brand and you give them the tools to do a good job and they are treated well, they're going to be happy.”

Richard Branson
How do we solve this problem?
12 ways to make quality lighting easy for you

- **Performance**
  - **Illumination** – task, space, face
  - **Modelling** – modelling index, illumination ratios
  - **Colour** – measurements - spectrum, Ra/Rf/Rg, TLCI, CT
  - **Contrast** – glare, colour, uniformity, flicker

- **Efficiency**
  - **Technology** – distribution, lamp and ballast efficacy
  - **Control** – presence/absence, daylight, task/scene, timed off
  - **Application** – installation, use, task, zoning, maintenance
  - **Environment** – reflectance, visible smart metering

- **Comfort**
  - **Atmosphere** - mood
  - **Interest** – highlights, stimulation
  - **Appeal** – additional elements, unique and tasteful
  - **Balance** – visual guidance, natural rhythms
Communication goes deeper
TLCI & Flicker
**Colour** – the measure and impression of the colour composition of light viewed by people or technology

**TLCI** – A measure that indicates how accurately colours are revealed for cameras
Colour –
Ra, Rf, Rg, TLCI or all?
Contrast – the experience of light against dark either directly or via reflection impacts how effectively we can see in any situation.

Flicker – The effect of changing contrast over time.
Contrast

*Flicker for people or cameras?*
Which space is better lit?
Which space is better lit?
In fact 81% of Office staff reportedly use hand held devices such as Smartphones and tablets in daily work.
GLOBAL DATA

Mobile connections, including M2M
Jan 2016

7,647,092,762
▲ 6.10%

World Population

7,298,786,572
Controlling glare both for the eye and the computer screen
Task / Face / Space
Comfort Management
Comfort Management