The Park Plaza Westminster Bridge, London, Project

In the city of London, The Park Plaza Hotel Chain built a luxury hotel.
Works on site started late 2007.
The Westminster Bridge Hotel and the London Big-Ben face each other across the river Thames.

The hotel was built using modern techniques and sophisticated technologies, thus the introduction of this advanced data collection, processing and reporting system was well accepted by the project members.

To mention just one, major, modern technique:
The room construction was built around the 'POD'.
A POD is the complete bathroom cubical.
The entire bathroom was built and equipped in Newcastle, some 300 Kilometers away from the construction site.

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Needless to stress that the POD/bathroom contains the 'heart' of the room. All water-in, water-out, air-conditioning, electrical connections, communication etc. are channeled to the POD and are ready-for-use upon PODs arrival to the site.

It was just a logical decision to also assemble all other accessories on the POD external walls. Having the POD completely assembled in Newcastle, in a dedicated factory production floor, enabled the bathrooms to be fully prepared, awaiting the hotel structure to be built.
PODs were transported, four at a time, on heavy trucks and pushed-in through the hotel perimeter to their final position.



This special technique saved on construction time and on room/bathroom construction, as working in a production plant was more efficient than having the bathroom built on-site.

The G. Egosi staff was called in to this prestigious project, to provide tools for controlling the final acceptance test of the hotel, being the largest in London. Upon completion, in 2010, the hotel will hold over 1020 rooms, being luxurious Suites and Studios.

Based on its previous experience, in production floor data collection, Software development, and mobile software applications, a unique data collection and reporting system was created.

In the hotel final tests, engineers of ten different categories were employed. This professional staff involved Electricity, Air Conditioning, Plumbing, Millwork, Plastery, and more.

Every inspector was equipped with a hand-held mobile terminal.

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A unique application was built and installed in the hand-held terminals, having the following main features:

The application is addressed to the tested category
(No categories, other than the specific one,
are presented to the inspector)

A list of tests, relevant only to the type
of the checked environment
(e.g. a Standard Studio, a Suite, a Corridor, Staircase etc.) is presented.
The inspector uses a simple checklist to indicate the test result.

Rooms, having an exceptional list of activities to test, are presented with their relevant list only (e.g. Disabled rooms – having special accessories required for disabled people)

Test activities are listed by their relevant order, simplifying the inspector's work.

The inspector can add a remark – by picking a pre-defined remark from a picklist.
A different remark can be attached to each test.

The inspector can also add a freehand text remark – in those cases where the pre-defined remark cannot identify the problem. A different remark can be attached to each test.

A picture, or a drawing, can be attached to each test, to show how the installed result should look like. This feature saves the need to carry heavy papers during the site testing.
Examples for such aids are:

- A wiring, in a color picture, of a communication wall jack, or:
- A picture of the accessories installed in the bathroom, or:
- Any picture (in JPEG format, providing the necessary details, may be attached to each and every activity)

One server accepts all tests results.
Upon completion of the daily routine tests (or whenever desired) the inspector(s) upload the accumulated data to the system server.

Data is being processed and reports are being prepared.
In order not to disclose the system analysis, the reports are not detailed here, but these reports do cover the following (and more):

- A single room detailed report.
- A single floor detailed report.
- A report by type of room, summing up rooms/environments of the same nature.
- Reports by a single category
- Reports of all categories.
- …

Naturally, as time and work progressed, the reports requested by the management changed in nature. Initially reports were requested for the finished tasks. Upon work progress the reports showing unfinished tasks became more important – as these demanded special attention, to complete the project on time.

The collected data and processed reports are being wrapped and sent to an Internet Website storage.

Each authorized system user may approach, at any time, the Website storage and download all updated data to his/her computer.
The only requirement, other than being an authorized user, is having an Internet access.

Once the data was downloaded to the users' computer (be it a stationary desk-mount computer, or a mobile laptop) the users may view all reports and data status, even if they go off-line.

Staff meeting, being a 'Babylon' conversation in the past, became a very efficient tool to discuss common problems.
One of the staff members connects a laptop to the conference room wall projector and everybody follows the most recent update of the test results.
Moreover, the data accumulation, processing and display system created common grounds for all users – regardless of the inspected category.

For management purposes,
a graphical reporting system was set up:
The manager selects a floor
and reviews its exact status.
The manager can also select any single category,
a group of categories or the level of readiness,
as a parameter to view the graphic report.
Rooms are colored to show their readiness status.
Naturally RED color was selected
to indicate unfinished rooms.

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Rooms completion is gradually advancing, but total readiness will be achieved only upon project completion, so in the meantime, all rooms may be colored in RED.
To help the manager assess the level of completion, a 'sensitivity slider' was introduced. The managers can select the level of readiness they want to view and rooms which exceeded this level are GREEN colored.

As the project materialized, the G. Egosi team were called in for further assistance.
Hereunder, some examples are listed:

a. Decorative glass damage.

   The beautiful rooms are decorated with glass pictures, covering the entire face of the bedroom cabinet.
   In Suites, also the shaft wall holds a similar glass picture, covering the entire wall.
   Same applies to the hotel corridors, where glass decorative pictures cover some of the maintenance piers.
   As the total area is large, the pictures were divided into nine (9) or twelve (12) parts.

   During the transportation and construction activities, some of these beautiful glass parts were damaged. Some needed replacement, others could be repaired.

   A software module was built and installed in the hand-held mobile terminal. Its complementary module was built into the main server.

A system supervisor inspects the picture components and indicates that:

- A picture was replaced by a different one than planned.
- A picture part (one of nine, or one of twelve) requires replacement.
- A picture part was damaged – Repair required.



Inspection results are uploaded to the main server, processed and transmitted to the Internet in the same manner as previously described.

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Moreover, the person in charge of the repair activities gets a computerized tool to:

- Accumulate parts of the same catalog number – for further order preparation.
- Accumulate reports, by part position, for future activities consideration. Listing of parts distribution to rooms, upon their arrival from the manufacturer.

b. Millwork damages
Two walls in a Studio room and three walls in a Suite, are made of nice looking, well processed wood.
During room activities also these parts suffered damages. Some needed repair, other had to be replaced.
As in the case of glass parts, a software module in the hand-held mobile terminal and an accompanying software module in the main server helped identify and group the problems.

Conclusion

The follow-up system saved the project many times its costs, providing:

1. Ultimate project status control
2. Common tool, for all professions, to report and present the final acceptance tests.
3. Time saving, estimated in months, of construction times.
4. Manpower saving, having one inspector maintain the job of two or more skilled staff.
5. Better teamwork, when everybody shares the same tool and reporting system.
6. The ability of all members, involved in the project (including consultants employed in many fields) to watch the inspection activities status – without interference with day-to-day work.
7. As the project involved many professions (Inspection categories) and many people, change requests became very popular. The tool enabled un-attended update distribution. Upon data update, the system checked (in background) if the user requires executable files update. In the affirmative case – update was carried out without user interference.
8. Payments to sub-contractors were made on the 'Green' basis – namely, only finished rooms entitled the sub-contractor to issue an invoice for the room.
9. Reports, highlighting unfinished tasks, enabled effort planning to closing the gaps.