

Feedback from a tailor-made mission

How a real estate developer achieved exceptional results on a 140-apartment project:

Cost : - 17% ✓

Time : - 4 months ✓

Snagging : 0 ✓

Lean construction
and site logistics
for your projects



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OPTIMISED PROCESSES TO BUILD FASTER, CHEAPER AND WITHOUT SNAGGING

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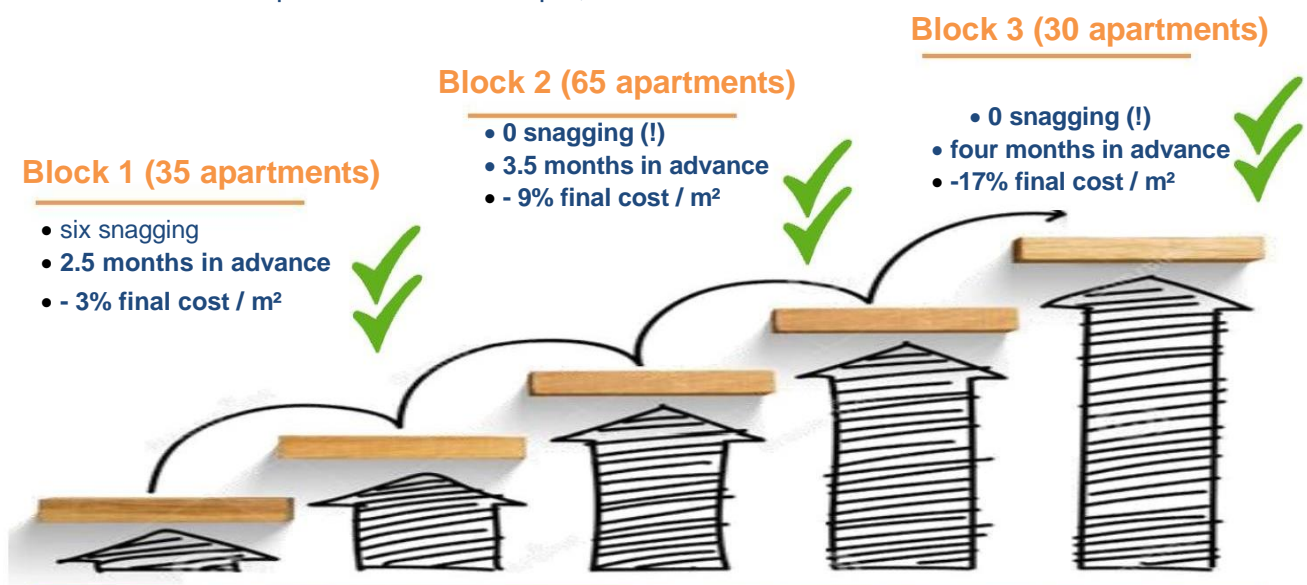
1 CONTEXT OF THE MISSION – ISSUES AND KEY FIGURES

JM Immobilier Belgium, the local representative of the Scandinavian group-listed real estate development company JM, with 2,500 employees and 4,000 units built per year, has launched the construction of an ambitious development project totalling nearly 500 units, divided into three phases over eight years. The JM Immobilier Belgium team, which carries out the project management of execution in separate lots, has encountered difficulties since the first construction phase and decided to change the paradigm at the start of the last phase. This consists of three R+5 blocks, which will be built consecutively, with tenders handed over to companies in between, for a total of **140 units and 11,000 m² of building space**.

A tailor-made mission to support the developer's team is decided, and Patrick Dupin is selected based on his on-site experience and in project management and optimisation processes. The mission begins when the structural work of the first block of this third phase is already well advanced (and all the companies are already under contract with the promoter. The companies, therefore, have no contractual obligation to change their way of doing; this is where the Consultant's experience takes on its whole meaning to gently lead a human group towards change while sustainably anchoring the new tools.

The mission begins with a rapid operational audit; the situation on the site immediately appears delicate: numerous quality, supply, and safety problems, delays already noted, additional costs, ineffective (and/or useless) meetings, tensions... in other words, all the ingredients for a complicated project.

The vision of the Director of JM, “Rome was not built in two days,” made it possible to lay the foundations for operational excellence on site gradually. The operational challenge was moving efforts upstream of construction site flows (equipment, materials, information, labour) to implement project management **based on anticipation rather than reaction**. The mission made it possible to obtain rapid, measurable and concrete results :



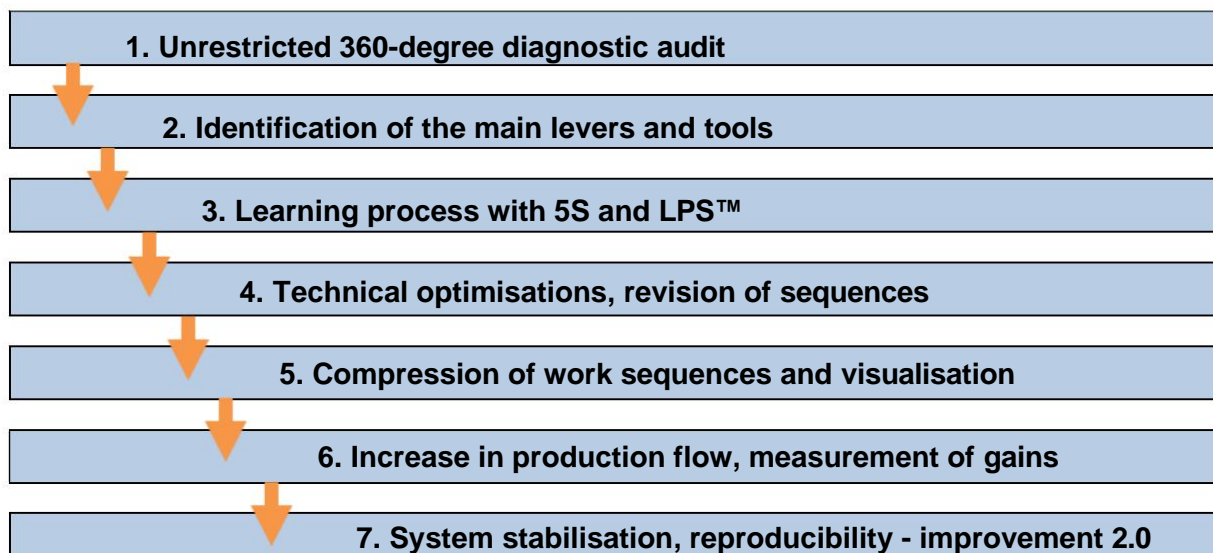
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SUMMARY

1. CONTEXT OF THE MISSION – ISSUES AND KEY FIGURES	3
2. SYNTHÈSE DE LA DEMARCHE – RESULTATS ET TAKEAWAYS	4
3. PHASE 1 – YSAÏE BLOCK - 35 APARTMENTS: SETUP	5
• “5 S” organisation and “LPS” planning Last Planer® System.....	5
• Weekly collaborative planning and measurement of commitments..	6
• Result of the phase 1 approach (35 apartments).	6
4. PHASE 2 – BLOC CHOPIN - 65 APPARTEMENTS : ACCELERATION !.	6
• Optimization of the passage of flows: preparation for acceleration..	7
• Compression of sequences in a decompressed space	8
• Visualization of the tasks carried out - commitment to their completion	9
• Result of the phase 2 approach (65 apartments).	9
5. PHASE 3 – VIVALDI BLOCK - 30 APARTMENTS: CONSOLIDATION	9
• Increase in the production absorption capacity of the site.....	10
• TAKT Planning: stabilise the speed - make the system reliable	10
• The site as a marketing tool to boost sales.....	10
• Result of the phase 3 approach (30 apartments).	11
6. CONTACT	11

2 SUMMARY OF THE APPROACH - RESULTS & TAKEAWAYS

Therefore, the approach adopted for this mission began with an objective assessment of the situation at 360 degrees to define the priorities to be addressed and the levers and tools to be used in the short and medium term. Implementing “5S” thus made it possible to create an environment conducive to productivity, quality and safety and that of LPS™ to realign construction site flows. From then on, the technical details and sequences could be reviewed and optimised to compress the sequences without overloading the site with unnecessary resources. The work could speed up considerably if the site were efficient and flow-controlled. Delays and costs have decreased while quality has increased.



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3 PHASE 1 – YSAYE BLOCK - 35 APARTMENTS: SETUP

3.1 Organization “5 S” et planification “LPS” Last Planer™ System

The spatial organisation of the site was reviewed with the works teams to realign efforts and workflows with the planning and short-, medium- and long-term deadlines. Areas dedicated to storage, circulation, transit, etc., have materialised and been made visible. The first stage of LPS™ collaborative planning was then put in place—the result, optimised planning and its constraints inserted in the company contract.



This workshop made it possible to detect the operational subjects to be addressed as early as possible to maximise the achievement of the objective before emerging later with more significant consequences and implications. Sharing everyone's constraints and opportunities with a single purpose made it possible to understand the realities of planning, anticipate dedicated technical problem-solving workshops and launch fine-grained.

They planned the day with site managers as part of the LPS™ stage. 2. Building this “desire to do better” by questioning habits is critical to achieving ambitious objectives as they were assigned for this mission.

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3.2 Weekly collaborative planning and measurement of commitments

The site became legible, and the teams integrated the planning; finer planning began by integrating the site managers. This is the second stage of the LPS™: a meeting of one-hour maximum as a gear for the milestones of the overall planning and a transmission belt to the site. Each site manager lists, optimises and coordinates his work for the week, down to the day, with all the other site managers.

This excellent control makes it possible to detect the slightest slip. The sources of the problems are traced to prevent the same issues from repeating themselves from week to week. This recurring structured and formalised learning approach is critical for continuing the work acceleration.



Weekly Work Plan: Anticipation 15 jours

Apt	Lot	Activité de la semaine	Je 18/9	Ve 19/9	Sa ###	Lu 22/9	Ma 23/9	Me 24/9
5B	MSB	Cornières	X					
B	LAURENT	Evacuations	X	X		X	X	
2A	GRANIP	Fin Carrelage	X	X				
3A	INVENT	Installation des ventilo double flux						X
3B	GILLION	Reprise élévations communs						
B02	GRANIP	Carrelage cuisines et sanitaire				X		
A5	RODOLPHE	rainurage et cablage	X	X		X	X	X
RdC	BATI	commencer faux plafonds WC gainés				X	X	X

4 Result of the Block 1 approach (35 apartments)

- six snagging
 - **2.5 months in advance**
 - **- 3% final cost / m²**
 - **0 registered mail**
- 

Implementing the two site management tools, “5S” and LPS™, has created an environment conducive to productivity and quality while increasing production rates.

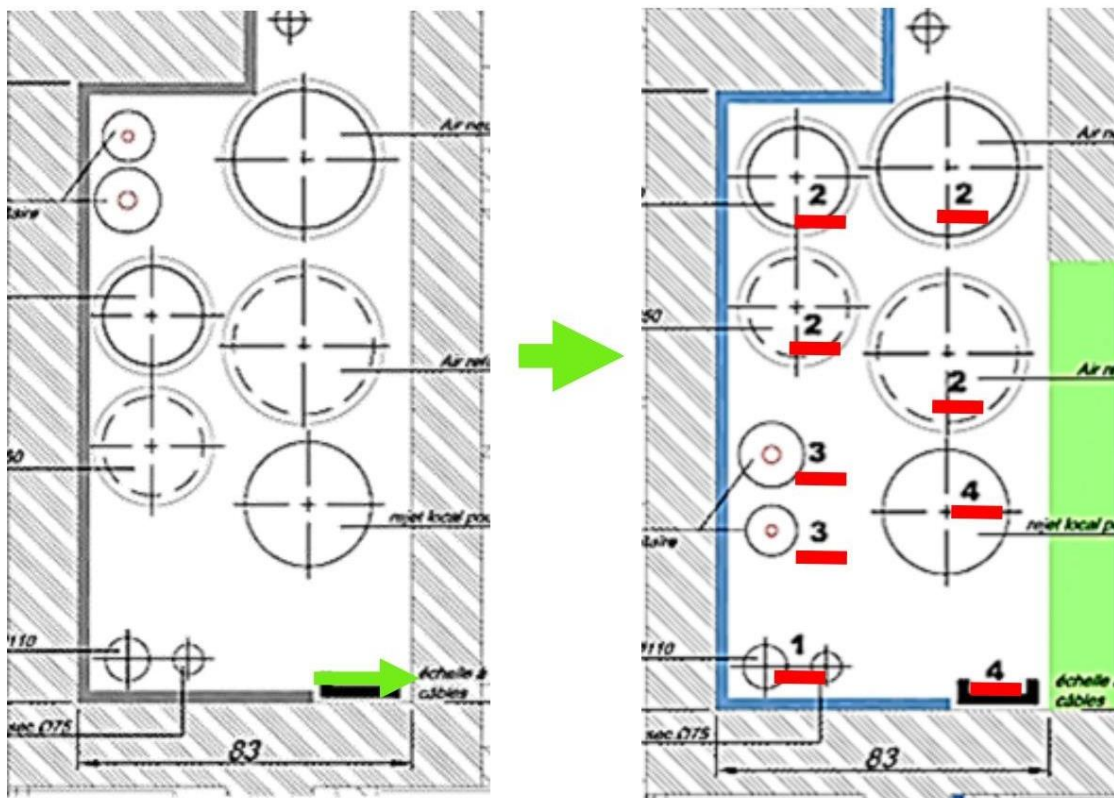
Deadlines have been compressed, and self-checks have been carried out throughout the work to limit snagging and additional costs significantly. Better control of the site and effective communication also made it possible to avoid sending registered mail throughout this first phase, a first on a construction site! ...

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5 PHASE 2 – BLOC CHOPIN - 65 APPARTEMENTS : ACCELERATION !

5.1.1 Optimization of flow passage: preparation for acceleration

Once the new cruising speed was established and stabilised, the optimisation sources came through technical optimisations and the challenge of engineers' details about constructability and ease of installation on site. The assembly of techniques in the raisers, slowing down the construction site, had been identified as one of the bottlenecks thanks to LPS™. The engineers who drew up the plans were often far removed from the operational realities of the site. Thus, micro-coordination workshops have, for example, wholly overhauled the layout of the raisers to make them much more easily buildable and unlock this bottleneck.



The installation of the different elements of these technical backbones was thus identified, sequenced, and thought out for safety and to maximise quality. The sequences could, therefore, be placed on the execution plans, the result of the workshop between the technical engineers and the executing site managers.

Finally, identifying a fused wall to facilitate the exit of the work from the raiser also favoured the speed of execution. Thus, all the rest of the technical tasks and the tests were able to begin much earlier than expected in the initial schedule. Companies, therefore, had more time to do well, gain execution confidence and maintain the pace of work and resources allocated to the project to produce faster than expected.

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5.1.2 Compression of sequences in a decompressed space



The next step in the search for cost and schedule optimisation was to compress the work sequences to extract hidden margins. To do this, the facade sequences were revised to install the aluminium. (including glazing) to the progress of the structural work, which could have significantly accelerated with the approach put in place. A single buffer layer was left to dry and support the slab above.

The impact of this approach was rapid and significant. MEP trades could work on the 1st floor while architectural trades projects were already on the ground floor, thus significantly compressing planning. Companies could thus operate in larger spaces, use more production resources, and increase monthly production. Self-control procedures initiated in phase 1 have also been refined to reduce the possibilities of snagging further and provide the following trade with perfectly executed work. The production flow was thus continuous and constant while having considerably accelerated.

Intégration électrique	Sanitaire	Chape	Prépa	Enduit	faux	Faïence	Enduit	Equip Elec	Car	Eq.	Peinture	Pose parquet	peinture porte	
chauffage	Ventilation		Enduit	1e couc	plafond	murale	2e couc	Eq. Plom	Rad	Sol	ven	Plafond	pose porte et cuisine	
Intégration électrique	Sanitaire	Chape	Prépa	Enduit	faux	Faïence	Enduit	Equip Elec	Car	Eq.	Peinture	Pose parquet	peinture po	
chauffage	Ventilation		Enduit	1e couc	plafond	murale	2e couc	Eq. Plom	Rad	Sol	ven	Plafond	posè porte et cuisine	
: Platre	Intégration électrique	Sanitaire	Chape	Prépa	Enduit	faux	Faïence	Enduit	Equip Elec	Car	Eq.	Peinture	Pose parquet	pe
	chauffage	Ventilation		Enduit	1e couc	plafond	murale	2e couc	Eq. Plom	Rad	Sol	ven	Plafond	pose porte et cu

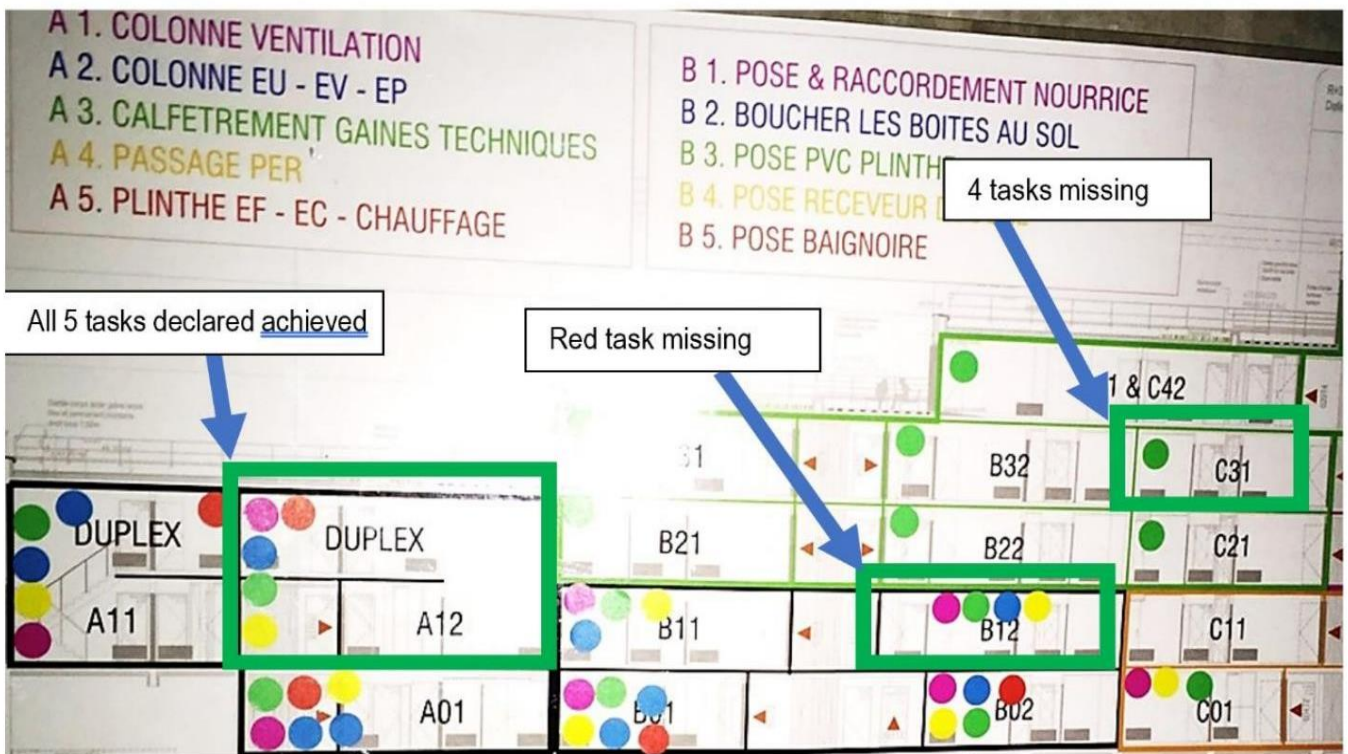
Once the companies acquired the system, a new acceleration was implemented. The “Devil hides in the details ” and “ the smaller a task is, the easier it is to follow ”; the approach was no longer applied to macro-tasks but to micro-tasks. The details and inter-trade micro-coordinations were reviewed more closely and the sequences and interlocks were again optimised until all stakeholders obtained a consensus.

This dichotomy generated a substantial gain in understanding the project, works, details and connections. Still, many technical problems could emerge and be addressed before they impact the site's progress. The site then became a vast “boulevard” accessible to companies, which were able to increase resources.

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5.1.3 Visualization of completed tasks and commitment to their completion

A simple, visual, and immediate system has been implemented to sustainably reduce costs, delays, and snagging. The micro-sequences described in the previous paragraph have been even more finely reviewed and broken down to extract the actions as simply as possible. Their corresponding sequence is taken up visually by stickers.



Each team leader had to affix the corresponding sticker once the task was completed to indicate its successful completion, thus visually indicating that the next task (according to the colour code) could be carried out confidently. Therefore, progress could be monitored live from the site in a detailed and reliable manner and then taken up in phase 3 on Google Spreadsheet to share it more easily with managers.

6 Sixy Result of the Block 2 approach (65 apartments)

- 0 snagging (!)
- 3.5 months in advance
- 9% final cost / m²
- 0 registered mail



The experience of Phase 1 made it possible to tangibly demonstrate the significant contribution of the approach to the construction site. The result was zero snagging, which had no longer become an objective but an obvious one. The total cost was significantly reduced compared to previous phases.

Each block had its dedicated contract, and the companies had to submit prices for each block as part of a call for tenders. The companies already present, having understood their interest in the proposed organisation of the site, all decided to respond more aggressively to the call for tenders for the second block to continue the process,

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7 PHASE 3 – VIVALDI BLOCK – 30 APARTMENTS: CONSOLIDATION

7.1.1 Increase in the production absorption capacity of the site



The increase in the pace of construction results in more significant material requirements.

Suppliers were involved in integrating or even developing innovative solutions for palletising, packing, and optimising logistics. Naturally, their interest is also to sell quickly but without urgency. “Last mile logistics” workshops were carried out to guarantee delivery sequences and times. The rationalisation of packaging has made it possible to limit storage and handling, waste and loss of time and thus reduce delays.

Preparing dedicated packages by micro-zone, delivered on-site, was critical in limiting errors and wasted time finding “the right part”.

Handling tools facilitating the movement of materials on site also contributed to the smooth execution and freed up time to focus on quality, self-control and, therefore, costs.

7.1.2 TAKT Planning: stabilise the speed - make the system reliable and robust

With the aim of the approach, “doing it faster, cheaper and without snagging”, and the tools made available now well integrated, it was decided to consolidate the achievements by stabilising the execution speed. To do this, a final tool, “ TAKT Planning ”, was put in place, a visual system developing the stickers mentioned above. This is about ensuring that the duration of each task in each sequence is the same duration to move at the same pace or TAKT. All site managers previously sought and validated this TAKT duration of 2.5 days in line with achieving the new deadline objectives.

	Grundrissarbeiten	Brickarbeit	Flussarbeiten	Stromarbeiten	Sanitärarbeiten	Wandarbeiten	Deckenarbeiten	Leuchteinstellen	Verkleiden	Malen	Glaserarbeiten	Carportarbeiten	Maßnahmenarbeiten	Einbauarbeiten	Heizen	Stromarbeiten	Sanitärarbeiten	Wandarbeiten	Deckenarbeiten	Leuchteinstellen	Zustellen	Einbauarbeiten	Sanitärarbeiten	
B21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
B22	1	0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1
B23	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
A31	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
A32	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
A33	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
A34	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
B31	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
B32	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
B33	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
A41	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
A42	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
A43	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
A44	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
B41	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
B42	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
B43	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
A51	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
A52	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Possibly unfinished/uncontrolled tasks thus appear clearly to ensure monitoring up to the highest level according to specifically developed “tachometer” dashboards.



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7.1.3 The construction site as a marketing tool to boost sales

All the tools implemented over the three phases have profoundly changed the paradigm of a “construction site”, traditionally dangerous, stressful, disorganised and dirty, into a structured, organised, legible, secure and clean work environment. The site was thus able to become an important marketing tool, with the success of the open days scheduled every Saturday.



The drop in costs compared to previous phases, partly reflected in the sale price, the reputation for the quality of blocks 2 and 3 and the reassuring image of the site during visits, led to a flash sale of the 30 apartments.

8 Result of the Block 3 approach (30 apartments)

- 0 snagging (!)
- 4 months in advance
- - 17% final cost / m²



“Zero snagging” was no longer an option!

The apartments were delivered on average four months before the initial schedule, contractual with the buyers. The final cost decreased by 17% compared to the flats built just before the support mission despite a significant increase in the price of materials...



“*Doing it faster, cheaper and without snagging*” became the norm at JM, who shared his experience at numerous conferences; the figures presented here are therefore public/shareable with you.

“The first kitchen was installed on the ground floor while the roof was not finished, and the rest came in, followed quietly... I had never seen that in my 25 years of career! »

*Christopher LEE, General Manager JM,
Client of Patrick DUPN for this mission.*

9 CONTACT

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