

Fast4shop: The new Aseptic Retail in self-checkout and the control of serialised products in Pharmacy 4.0

A strategic conversation with David Lladró Roig, President of Futurian and CEO of Invertige Family Office, on how Fast4shop is redefining the profit and loss account in pharmaceutical retail by pioneering a new self-service and self-checkout model—eliminating the risk of contact-based infections—coupled with unit-level inventory control via RFID.

Retail's transactional infrastructure suffers from a dual systemic deficiency: conventional optical scanning generates a blindness at the individual product level, hindering physical inventory control in line with current IoT trends; and shared Touch User Interfaces (TUIs) operate as documented vectors for pathogen transmission. Faced with this operational and sanitary vulnerability, The Silicon Review dissects David Lladró's investment thesis. We analyse how *Futurian*—a pure R&D company—neutralises these legacy inefficiencies by deploying a multi-sensor integration within *Fast4shop*, thereby consolidating the new industry standard: «*Aseptic Retail*».

Mr Lladró, financing such a disruptive ecosystem in Retail from scratch implies assuming an asymmetric capital risk. To understand the corporate magnitude of Futurian, we need to dissect its origins. What was the strategic catalyst that originated this company, and how have you structured its intellectual property to safeguard it globally?

The investment thesis of a Family Office like Invertige demands analytical audacity: we capitalise on structural market vulnerabilities

and discard redundant iterations. Our foray into the technology sector matured in 2016, pivoting from co-investment in Venture Capital towards direct execution. That same year, we established the priority date for Fast4shop's foundational patent. By 2018, the technology was patented in Spain and the United States—overcoming a global rejection rate that exceeds 90%—and we proceeded to safeguard this intangible asset in Japan (2021), China (2022), and India (2024), with their respective grants.

The definitive catalyst for our corporate consolidation was the health disruption caused by COVID-19 in 2020. Our CEO, Javier Ferrer Alós, integrated his background as a pharmacist and systems architect to model a new paradigm of protection against pathogen vectors transmitted through aerosols, culminating in the kinematic patent *Airepi*. This intersection between asepsis in public spaces and systems technology validated our investment thesis in biosecurity, driving Juan Vicente Lladró and me to structure the definitive vehicle.

In 2021, we established Futurian. We were not born as a traditional startup, but as a Deep Tech entity backed by more than three decades of industrial maturity. We are not simply a technology company; we are an engine of disruption. Our DNA is 100% R&D, and we have committed our capital to a single mission:

building the technology that will dictate the rules of future Retail in the post-pandemic era.

The injection of capital into disruptive systems demands validating an implacable market thesis. You have framed the origins of Futurian as an "ethical investment". If we distance this term from philanthropy and analyse it under a macroeconomic lens, what is the financial dimension behind Aseptic Retail, and how does it directly drive the end customer's operating margin?

In our investment thesis, ethics and profitability are not mutually exclusive; they are codependent. Financing technologies that resolve critical public health vulnerabilities is, financially, the greatest long-term value generator. The magnitude of this opportunity is empirically verifiable: analytical models project that the global market for contactless interfaces and spatial recognition will exceed 125 billion dollars by 2032. The fundamental driver of this capital flow is structural biosecurity.

Clinical literature from the Royal Society classifies Touch User Interfaces (TUIs) as persistent fomites, documenting the transfer of viable pathogens—such as the



David Lladró Roig, President

Influenza A virus and Staphylococcus aureus—and catalysing self-inoculation via mucosal routes, especially the eyes and mouth. In primary care nodes such as pharmacies, which see a high density of immunocompromised patients or those with active contagious diseases—such as during seasonal epidemics—conditioning the service on a shared screen is not merely a usability flaw; it is an unacceptable breach in infection control and corporate responsibility.

Fast4shop capitalises on this transition by materialising the Aseptic Retail standard. By replacing contact with volumetric reading and sensor heuristics, we complete customer sales in under 15 seconds. This Zero-TUI architecture directly impacts the bottom line: it neutralises the biological vector and eliminates friction at checkout, maximising the conversion rate in verticals with the highest commercial margins (dermocosmetics and parpharmacy).

Our leadership at this intersection of health and profitability has been validated by accolades such as the Top RFID Contactless Self-Checkout Platform 2026 and the Top Retail 4.0 Product System in Europe 2025.

The new scenario proposed by Futurian for pharmacies—integrating its WMS with traditional monolithic ERPs—seems quite a challenge. What technical safeguards does Fast4shop deploy to guarantee real-time interoperability without compromising the client's legacy infrastructure?

The structural problem with legacy ERPs is that they operate with databases oriented towards the national product code, rather than the unit and serialised product (IoT). To resolve this deficiency, Fast4shop offloads the processing of serialised products to the edge computing within its ecosystem. To synchronise the data

normalised to the product code, we deploy an asynchronous architecture with maximum decoupling: critical transactions are executed via an encrypted REST API, whilst less critical RFID serialisation transactions are queued over SFTP channels with SSH authentication.

The pharmaceutical ecosystem is one of the most highly regulated environments globally. By delegating the transactional friction of non-prescription sales to an unattended ecosystem, how does Futurian restructure the ROI of human capital, and what clinical governance architecture do you deploy to ensure regulatory compliance when dispensing prescription medication?

Our infrastructure does not replace the clinical professional; it reallocates their operational bandwidth towards high-value tasks under a very clear axiom: *"The counter is for those who need it"*. Automating the SCO for non-prescription products absorbs a significant portion of the counter's sales volume, freeing up the pharmacist's time for specialised advice.

From a regulatory standpoint, we operate under the principle of Compliance by Design, executing a strict segregation of flows: prescription-only medicines unconditionally demand physical custody, optical validation (DataMatrix), and human dispensing.

However, our architecture deploys a hybrid ecosystem that also optimises the traditional counter. For mixed purchases (prescription and front-of-store), we have natively integrated

RFID-AM/RF reading into the counter POS. By replacing the barcode with RFID identification, the professional processes parapharmacy items at the unique product level (EPC/SKU). This guarantees traceability and expiry control via the Fast4shop WMS.

Transitioning from the R&D phase to industrialisation is the greatest operational hurdle for any company. If we audit your current Scale-Up phase, how have you scaled your manufacturing to avoid bottlenecks?

Our roadmap has transitioned from engineering to commercial scalability. Empirical validation at the Juan Vindel Pharmacy (Madrid) operates as our live production node, where metrics demonstrate unattended, private purchases—we are talking about pregnancy tests, condoms, etc.—in under 15 seconds.

At an industrial level, we have separated R&D, centralised in Rocafort, from manufacturing, scaling our factory in the Paterna Technology Park—both locations in Valencia—to absorb the demand for Fast4shop systems. Before dispatching equipment to the market, we execute predictive prevention procedures: each unit undergoes factory burn-in and stress protocols to neutralise the early failure rate. Commercially, our international Go-To-Market launches in July with implementations in Portugal, backed by a qualified pipeline of certified distributors in France, Spain, South America, and Asia. This global expansion is supported by integrating international payment gateways—Verifone and GetNet—into the Fast4shop SCO, alongside Redsys in Spain, featuring

state-of-the-art NFC-enabled payment terminals that comply with the latest PCI PTS 6.x security standard.

To scale production outside Europe, we are deploying Joint Ventures based on modular SKD (Semi-Knocked Down) architectures, thereby mitigating local logistical friction. Nevertheless, we maintain centralised technical governance: the complexity of the Fast4shop ecosystem dictates that every international partner must validate their competencies through a mandatory, face-to-face technical certification at our headquarters in Valencia.

To conclude, let us address the strategic endgame. Scaling zero friction towards the extreme volumetrics of Fast-Moving Consumer Goods represents the sector's greatest historical challenge. What is Futurian's long-term roadmap, and how will you orchestrate your ecosystem to dictate the Retail 4.0 standard?

As an engine of disruption, our architecture is constantly evolving. This very summer, we will deploy innovations designed to definitively neutralise the vulnerability of SCOs to theft. This deterministic superiority is precisely what has catalysed our integration alliances with hardware leaders in key technologies such as Zebra, Sensormatic, Caen, Keonn, and Dfrobot.


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In the long term, our scalability is aimed at the largest market vertical: Mass Distribution. The roadmap adheres to a strictly sequential deployment. Currently, we are developing mobility peripherals such as the 'Frame f4s' to optimise automated order picking, which will transition to the end user through smart baskets ('f4s Shopping Basket') and large-volume trolleys ('f4s Shopping Cart'). This R&D cadence is calibrated to intercept the CAPEX inflection point in materials science. We await market maturity; the instant chipless RFID and graphene magnetic inks achieve commercial viability, our infrastructure will execute the definitive Retail 4.0 standard: deterministic traceability, zero friction at checkout, and the safeguarding of the operating margin. 

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