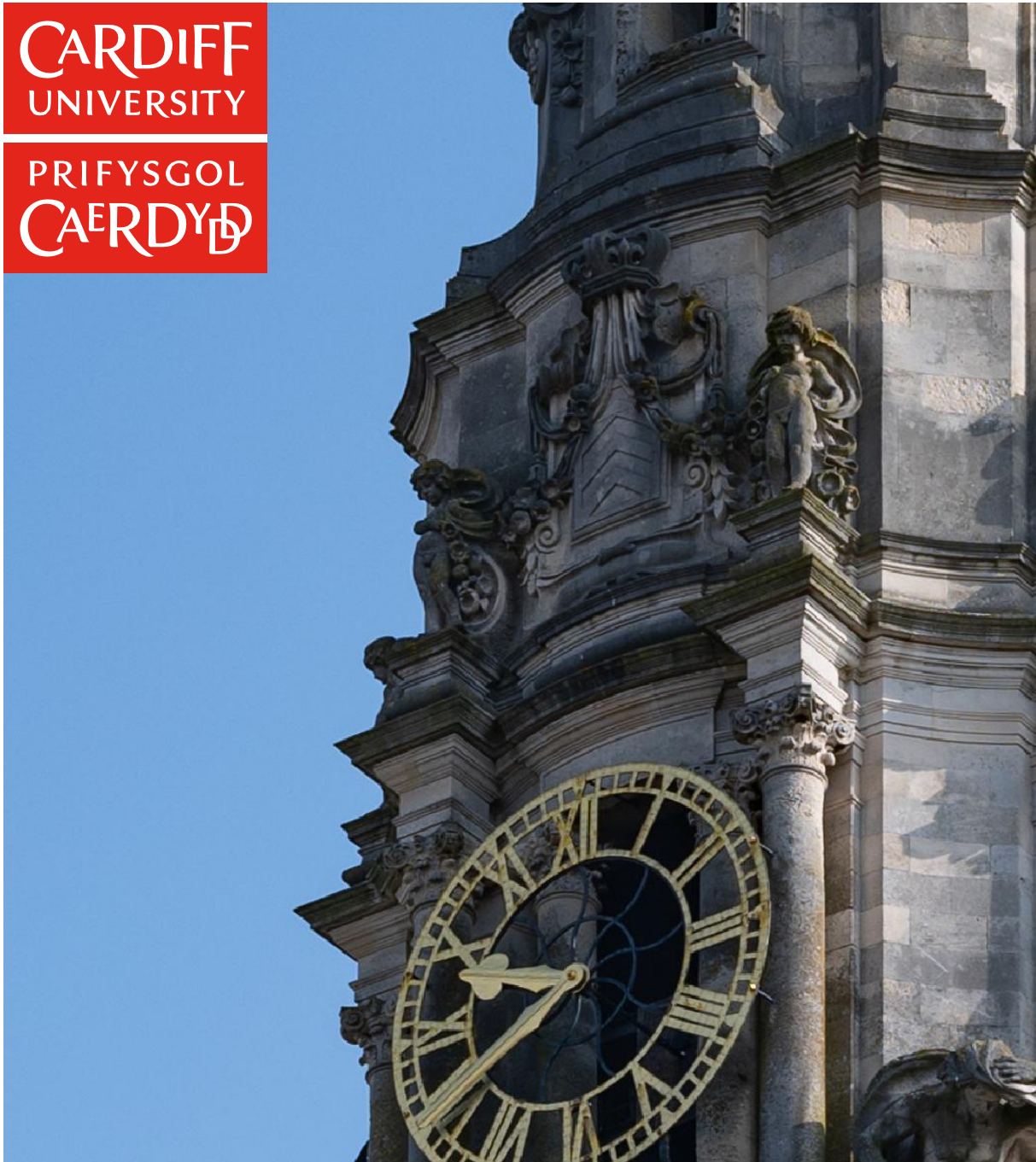


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**Mastering Inventory Accuracy in Retail:
Essentials for Higher Sales and Optimised Business
Performance**

*Glamorgan Building, Cardiff University
King Edward VII Avenue, Cardiff, CF10 3WT, UK*

Background

Retailers invest billions in systems that generate outputs such as forecasts and replenishment orders. These systems work on the assumption that the inventory record data upon which these outputs are based is accurate, which research consistently proves is not the case.

In fact, studies consistently show that up to 60% of stock records can be inaccurate at any given time, leading to frequent stockouts or costly overstock situations. As retailers increasingly rely on automated inventory management systems, errors in stock records become the norm leading to missed sales and inflated operating costs.

However, the current educational offerings and training available to students, retailers and the broader industry are all based on the assumption that the data being used in these systems is accurate. There is an opportunity and a need to augment existing training on inventory management with new knowledge on the problem of Inventory Record Inaccuracies (IRI), the consequences and the possible counter measures that the industry could adopt to improve inventory record accuracy.

The Need

Inventory Record Inaccuracies (IRI) are currently dealt with by diverse departments or most commonly cross-departmental teams, with personnel that otherwise have little or no experience and knowledge in managing inventory when the records are wrong. Further, and even when colleagues in industry have had some training in inventory management, forecasting and replenishment, everything they have learned at university, and on professional training courses, assumes that inventory data is always right. There is no education on the regrettable truth that most of the times inventory records are wrong, and the implications thereof, and this is precisely the gap that this course is addressing. Finally, with the growth of omni-channel retailing, where consumers increasingly seek detailed visibility of available inventory at each location before making a purchase, the importance of maintaining accurate inventory data has increased, highlighting the increased relevance of this course.

The New IRI Training Course

Our unique course, designed and led by renowned academics with deep domain knowledge and multiple decades of experience in retail operations and inventory research, will provide a comprehensive picture of the IRI landscape along with actionable insights and proven strategies to help retailers and the industry combat the resulting problems and improve performance.

What you will learn

Upon completion of the course, participants will be able to:

- Identify key drivers behind stock record inaccuracies and understand how these impact overall store performance and customer experience.
- Be able to confidently articulate the differences and similarities between inventory record accuracy and unknown loss / shrink / stock loss.
- Understand effective countermeasures to enhance stock accuracy, leading to reduced stock count frequency and lower operational costs.
- Understand the basics of optimising inventory availability and avoid stockouts, thereby increasing sales and customer satisfaction.
- Leverage insights from academic research and real-world retail applications to apply best practices for managing and auditing stock effectively.

This training will be interactive, with theories and knowledge from the academics, plus practical real-world examples from the participants. Further, gamification and stock control models will enhance the participants understanding as to how inventory systems work, and through what-if analyses, to simulate the implications of the problem and size of the benefit.



Figure 1: Class of 2025

The Programme

Wednesday 8 th December 2026 - IRI: MEASUREMENT AND IMPACT	
10:30	Arrivals and coffee
11:00	Introductions and Expectations
11:30	Maturity Model Exercise Based on our new research, we will share an IRI maturity framework that helps participants explore their organisation's response to the IRI problem relative to others across six dimensions. <i>Exercise: Where do you think your business is on the maturity model? How do you relate to your peers? What have been the changes you have made over time to increase maturity?</i>
12:30	Working lunch
13:30	How do you define inventory record accuracy? What are the different measures, what are the ways to collect the data, the common pitfalls, and the appropriateness of different types of metrics for different purposes. We will explore a new set of guidelines designed to help drive retailers' choices on measures. <i>How do you measure IRI? Which metrics have you adopted? How do you collect the data?</i>
14:30	Break
14:45	Implications of inaccurate inventory: The "so what?" We will explore the fundamental principles of inventory management in retail that covers the practices of replenishment and safety stocks, all based on the assumption that records are correct. Our research has proven that 60% are wrong, what are the implications of IRI, across categories, to the business? What is the evidence for sales growth, for positive and negative variances, inefficiency and productivity, across the supply chain. <i>Does your business work on the assumption that inventory is accurate? Have you thought of the cost and consequences of inaccurate inventory and if so, how do you articulate that cost in your business? To what extent is your business motivated to change?</i>

15:45	Break
16:00	Exploring underlying root causes Where does IRI come from? Why should we distinguish between negative (pilferage, damage, etc.) and positive IRI (e.g., invisible inventory in the back room)? IRI versus shrink, are they the same problem? <i>What are the choices that have been made by your business that may lead to IRI?</i> <i>What are the causes of IRI you deal with in your business?</i>
17:00	Close, check-in to hotels
18:30	Informal networking event: drinks and dinner We will have a good time, with food and drinks, in a cosy Cardiff pub
21:00	Close
DAY 2: Thursday 9th December IRI: INTERVENTIONS AND ACTIONABLE INSIGHTS	
08:30	Arrivals and Coffee
09:00	Predicting Wrong Inventory Records We share the latest empirical research and explore the predictability of inventory records per category and the implications for management for highly predictable vs. unpredictable categories. <i>How is your business thinking about this research and the implications for your business?</i>
10:00	Break
10:15	Putting Automatic Correction Capabilities into Practice Auto-correction is now possible due to data and computational capabilities not previously available. How do you put auto-corrections into practice, to enable the benefits to outweigh the risks and drawbacks? <i>What has been your experience of implementing auto-corrections, or if you haven't implemented them, what's holding you back?</i>
11:15	Counting Strategies What are the implications for physical counting, do you adopt different strategies for predictable vs. non-predictable categories, increasing frequency of counts for hard to

	predict categories? How practical are these strategies to execute in the real world of retail? <i>Based on the learning from the session how are you adopting your counting strategies?</i>
12:15	Working lunch
13:15	Engaging the Business All functions of the business are impacted by IRI. How do you engage all parts of the organisation to help support preventive, corrective and predictive strategies? <i>What is your strategy to engaging the parts of your business that matter the most for IRI improvement?</i>
14:15	Break
14:30	Putting learning into action This is your chance to reflect on the two days. Have you been able to identify actionable insights and new knowledge that will help advance your business up the maturity model? <i>What are the 2-3 things that you will follow up on and action in your business?</i>
15:30	Wrap-up and new ideas
16:00	Close

(all sessions will involve presentations from the participants to complement the academic input)

Costs

The course is led by a team of experienced academics who have collaborated with leading retailers. The cost will be £650 (+ VAT)

Duration: 2 days of expert-led instruction, in-person, at Cardiff University, UK.

Certification: Upon successful completion, participants will earn a certificate co-issued by ECR Retail Loss and the course leaders.

Benefits

Participants in the 2025 IRI College were asked to share what they thought were the benefits of the College.

"The College was great. Good facilities Excellent training content. Very experienced and knowledgeable host. Very good delivery of topic."

"It gives you a better understanding of how inaccurate records develop and compound over time as well as clear guidance on optimal counting strategies."

"Thought provoking and was reassuring that whilst the terminology was different the aim and logic we are following leads to the benefits described by having an accurate inventory base."

"I enjoyed the end-to-end analysis of this subject from concept to delivery."

"Liked the flow of the topics which made natural sense. A good blend of lecture and discussion and sharing best practice. Was able to take away the key relevant discussions to our activity, which I guess will be different for each person dependent on their role and challenges - i.e. loss prevention vs availability and volume growth"

"Fantastic course which I really enjoyed and would highly recommend; - Course was a really interactive experience, and spending time discussing challenges with other retailers was really valuable. This was a great opportunity to collaborate and learn from each other - Providing all the course materials to read post course was very helpful - there was a lot to take in and think about, so to be given materials and practical tools to take away was fantastic and will make it much easier to implement the learnings - The lecturers delivered with great enthusiasm and are hugely knowledgeable. We were made to feel comfortable from the start which was conducive to an interactive session."

"Really useful to focus attention on inventory, understand what causes inaccuracies and how we can use data to predict. Gaining insight from the research conducted and networking with other retailers to share pain points and learnings."

"The course was very useful for us, the visualisation tools are valuable in bringing the subject of IRI to life and - as a relatively low maturity business looking to develop new metrics for IRI - the discussion on the various ways of measuring accuracy was particularly interesting."

Who should attend?

The course is targeted to those working in retail on inventory management, shelf replenishment, auto correct phantom inventory programmes, store routines and stock audits. Participation is open for any retailer or for those at CPG's supporting their retail clients in either a head office or field-based role.

In the class of 2025, the following businesses were represented: Aldi, Asda, Boots, Deliveroo, JD Sports, B&Q, H&M, Iceland, Procter & Gamble, Red Bull, Waitrose. The job titles of the participants are listed below:

- Project Manager
- Head of Data Analytics & Insight
- Head of Loss Prevention
- Head of Profit Protection
- Senior Ops Manager
- Customer Operations Manager
- Loss Prevention Investigator

- Business Expert RFID
- Retail Operations Field Support Manager
- Retail Availability & Waste Manager
- Project Specialist
- Project Manager - Operations Development
- Senior Business Analyst
- Retail Process Specialist
- Stock Optimisation Manager

Academic Team

The course is led by a team of experienced academics who have collaborated with leading retailers across Europe to advance research and best practices in inventory record accuracy and stock management.



Yacine Rekik is Professor of Business Analytics at emlyon business school, France. Before that he was a Research Associate at the Distributed Information & Automation Lab of the University of Cambridge. The principal purpose of his research is to develop models that provide qualitative and quantitative insights into the impact of inventory inaccuracies and the benefits of RFID technology on the performance of supply chains in terms of cost reduction and/or improvement of service levels.



Aris Syntetos is Professor of Decision Science at Cardiff Business School, Cardiff University, where he is also the Director of the joint University-Industry PARC Institute of Manufacturing, Logistics and Inventory. He has over two decades of experience in inventory forecasting research, implementation and training, and he has advised many organisations on inventory forecasting related matters. Several algorithms developed by him are being utilised by major software corporations (e.g. Panasonic, Synchron).



Christoph Glock is head of the Institute of Production and Supply Chain Management at Technical University of Darmstadt, Germany. His research concentrates on the coordination of inventory replenishments and the management of physical stocks in warehouses. Prof. Glock has worked together with many companies, and decision support models and methodologies co-developed by him are today successfully used in industry to efficiently manage inventories and warehousing operations.

Venue

The training course will take place at Cardiff University's Glamorgan Building. Located at the heart of Cardiff's civic centre, next to the Welsh Government, this is one of the most beautiful buildings of the University. It was the headquarters of the Glamorgan County Council from 1912 to 1974 and currently hosts the faculty of the University's School of Geography & Planning.



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There are good connections to Cardiff airport from Edinburgh, Amsterdam and Paris. The train from London Paddington to Cardiff Central takes two hours. There are also plenty of great hotels close to the venue to match your budget.