

Seven ERP Systems in 18 Months

Implementing the Tesco
Operating Model at Fresh & Easy



Miles Thomas
Enterprise Architect
Tesco Stores Ltd

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at Fresh & Easy

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Structure of this talk

- What did Tesco set out to achieve
- What did we start with
- How did we plan and architect the solution
- What we deployed
- Challenges and Lessons Learned

An Enterprise Architects Viewpoint



Who is Tesco plc?

- A world-leading international retailer
 - UK Market leader
 - 30 million customers per week
 - 3,300 Stores world-wide
 - Employs circa 420,000 world-wide
 - Non-food sales 15% of total
 - Formats: Hyper, Full Service Grocery, City Centre grocery, Convenience (with & without fuel)
- Worlds largest .com grocery retailer
 - by deliveries, turnover, profit

Turnover
2007:
£46bn

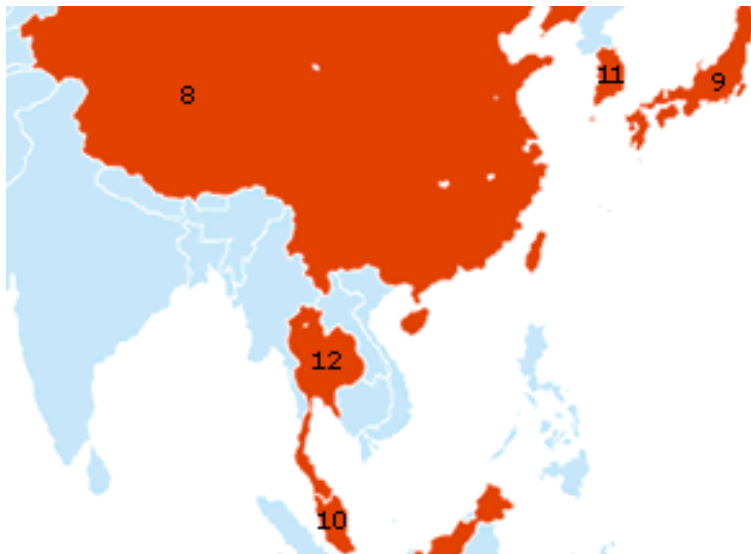
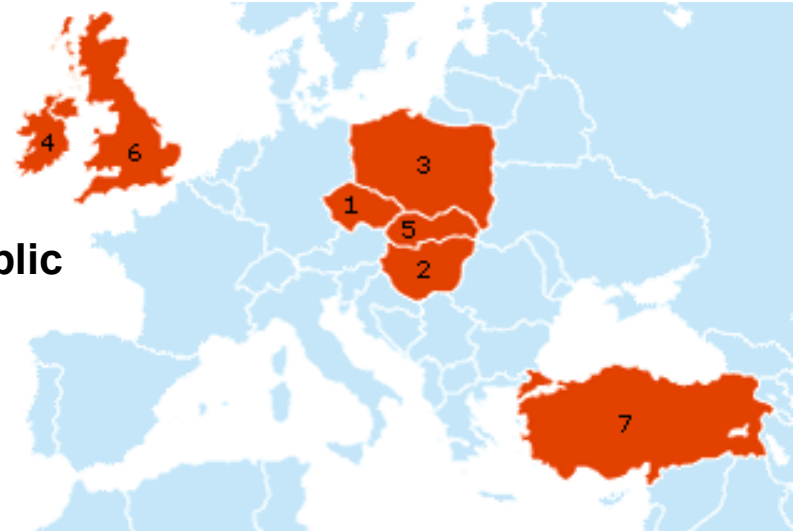
Long journey from one market stall in 1919



Tesco Across the Globe

International Growth is part of Tesco's strategy for overall business growth

- Czech Republic
- Hungary
- Poland
- Ireland
- Slovakia
- UK
- Turkey
- China
- Japan
- Malaysia
- South Korea
- Thailand
- 13. USA ...



TESCO | *Every little helps*



The team's mission in the USA

- Open a functioning, scalable grocery business in about 18 months
 - Starting from a deliberately small team and almost no IT systems in country
 - Needs to quickly achieve maturity similar to our most mature businesses (e. g UK)

Mission Impossible?

*With willing hearts and skilful hands,
the difficult we do at once;
the impossible takes a bit longer.*



What it's all about

- Delivering a fresh&easy shopping trip which is simple to operate and gets things right first time



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How did we know what to do?

- We had started on a playbook:
The Tesco Operating Model
- Parts of the operating model were deployed in 2005 onwards to other countries
- But we needed to review and extend what we had deployed previously

“It took us 5 years to be an overnight success”

(well known and often quoted cliché)



Tesco operating model-pre USA

Japan



Turkey

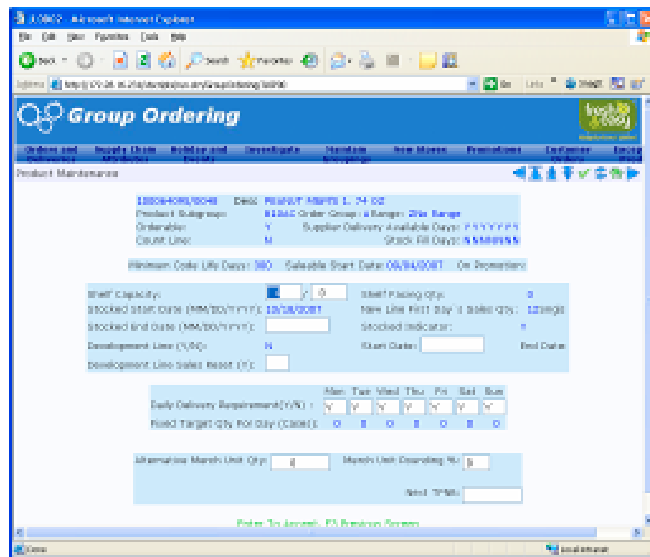


China



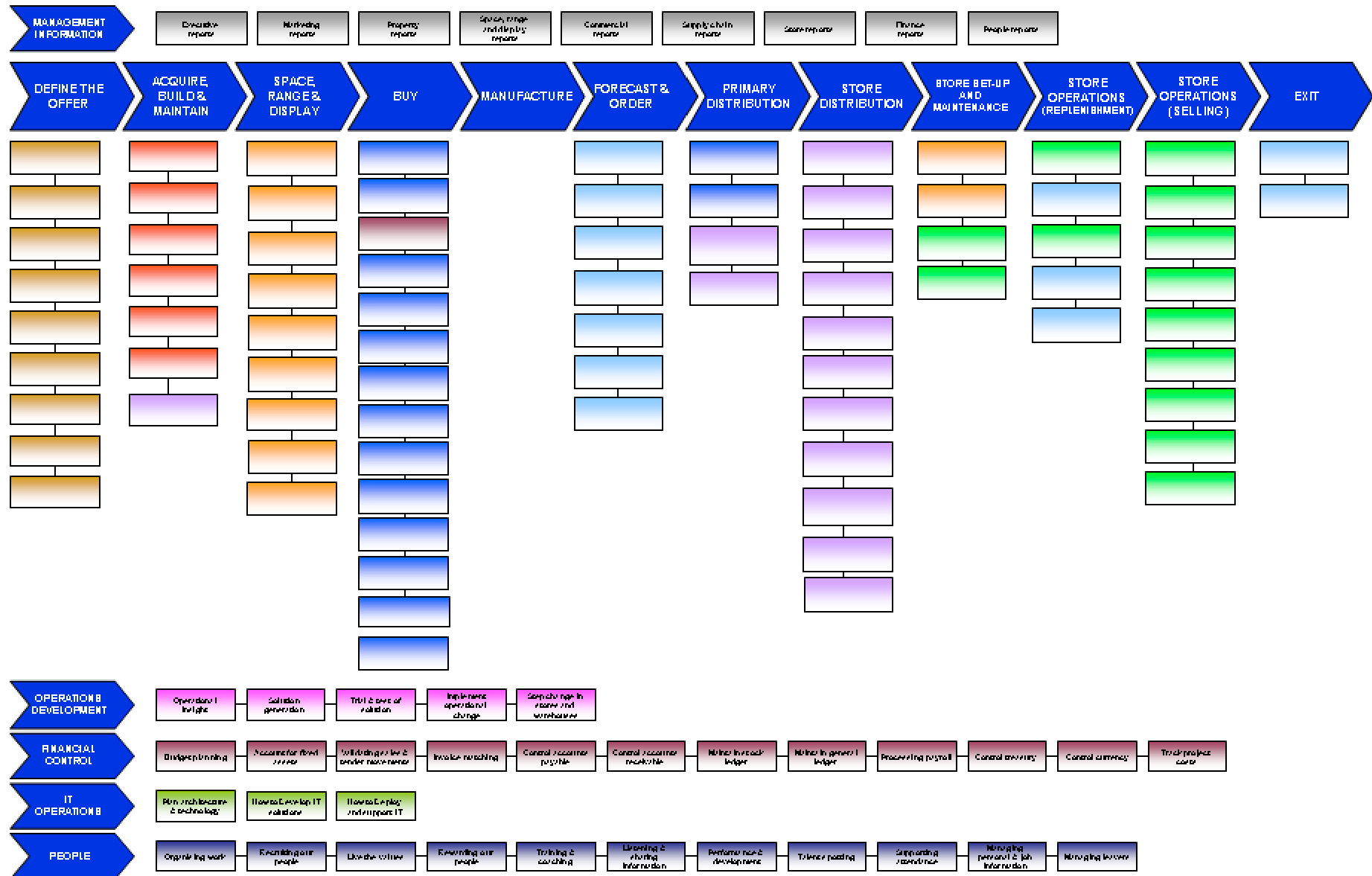
Utilising our Tesco expertise

- Fresh food ordering system and processes
- Space, range and merchandising tools
- Point of sale software
- Warehouse management and distribution systems



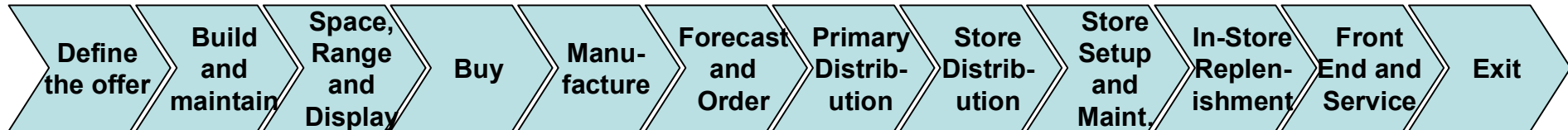
The Operating Model v1.27

- = Marketing
- = Property
- = Space, Range, Display
- = Commercial
- = Group Ordering
- = Replenishment
- = Store Operations
- = Finance
- = Information Technology
- = People
- = Information
- = Operations Development



Operating Model (summarised)

Information – to measure the operation



Operations Development – to continuously improve the operation

Financial Control – of the operation

I.T. – to support the operation

Planning
architecture and
technology

How to develop
IT solutions

How to deploy IT
solutions

How to operate
and support IT

Our People – within the operation

fresh&easy operating model

- Based on Tesco operating model
- Mature set of systems and processes



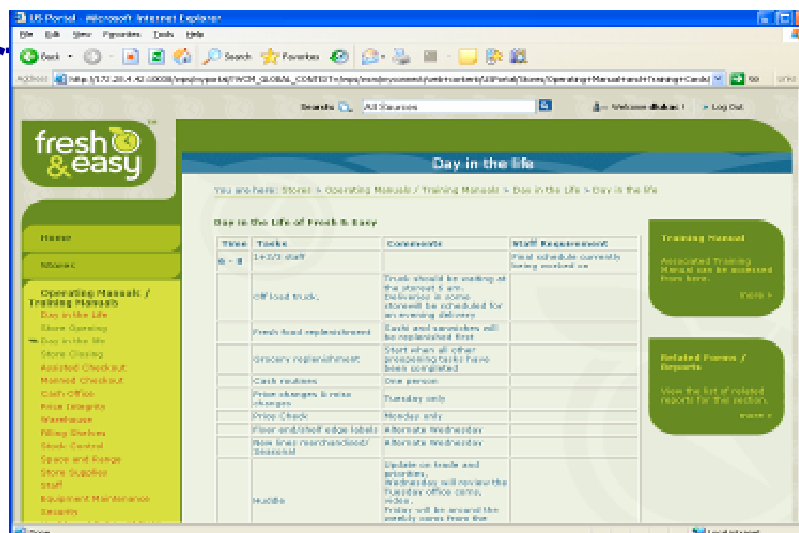
Tailoring the fresh&easy model

- Tesco operating model was refined to:
 - Ensure legally and fiscally correct
 - Remove complexity built in for running multi-format, large SKU businesses
 - Add kitchen systems to run food



Tailoring the fresh&easy model

- Goal of being a 21st century retailer and good neighbor:
 - Internet to attract and recruit our people
 - Automated administration processes



cedures



Lots of packages in the model

- Oracle Retail ORMS/ORPM (Commercial-area)
- Oracle Retail ORWMS (Supply Chain)
- Retailix Storeline (Retail) with NCR Self Service hardware
- Oracle Financials (Finance)
- Peoplesoft including Oracle Time & Labour (People)
- JDA Intactix (Space, Range & Display)
- Oracle E-Business Process Manufacturing (Manufacturing)
- Tesco Group Ordering (Supply Chain-clone of UK systems, common code base)



Lots of new packages in the model

Over 60%
New
& Improved

- Oracle Retail 12 ORMS/ORPM (Commercial-area)
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Many Supporting Applications

- Oracle Retail OReSA, OReIM
- ITS-TIMS (supplier communication)
- Tesco Ranging applications
- Tesco Group MIS
- Tesco Group Operational Reporting
- Tesco-developed integration

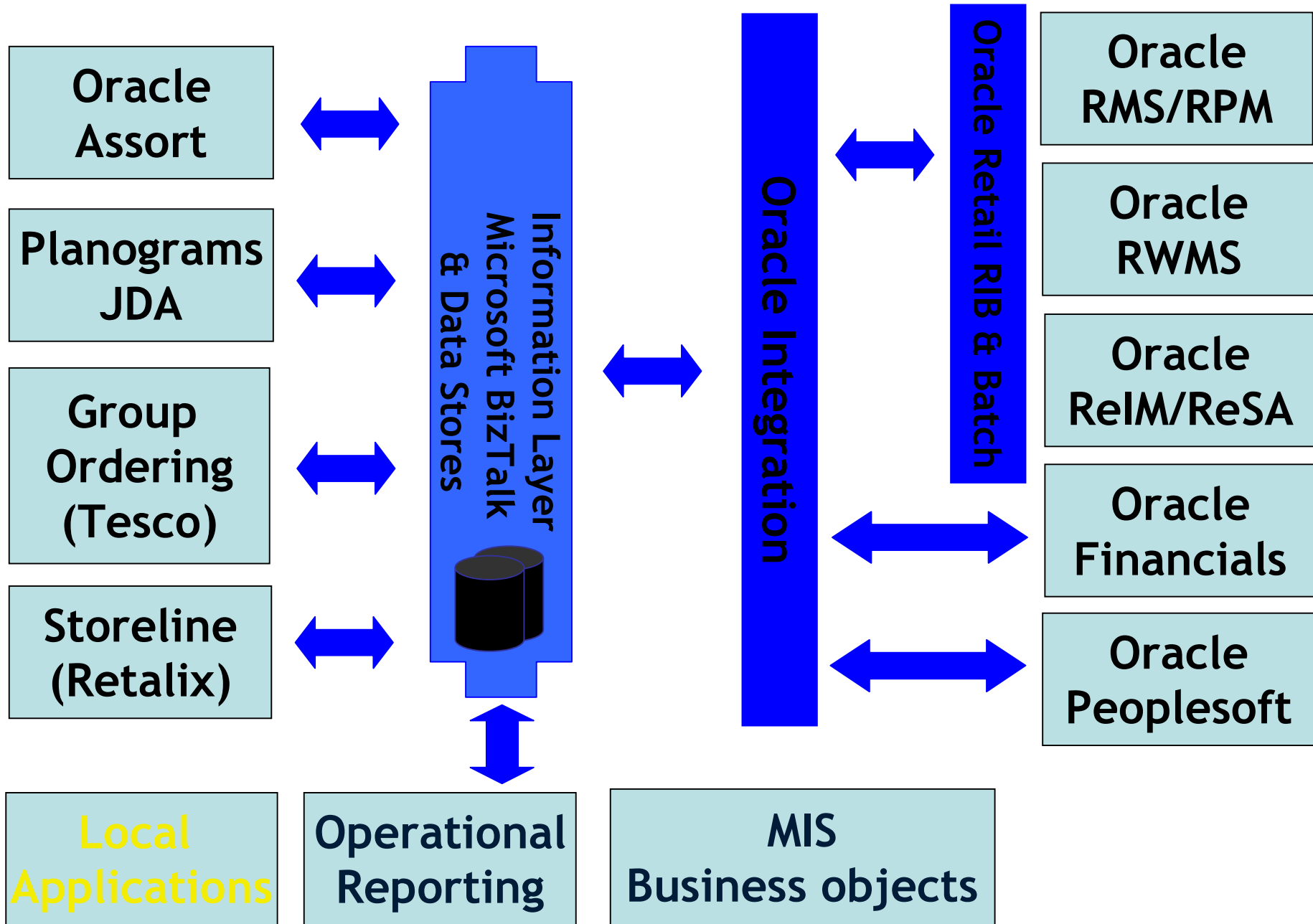


Many New Supporting Applications

- Oracle Retail OReSA, OReIM
- ITS-TIMS (supplier communication)
- Tesco Ranging applications
- Tesco Group MIS (new areas)
- Tesco Group Operational Reporting
- Tesco Developed integration

Completely
New
Integration





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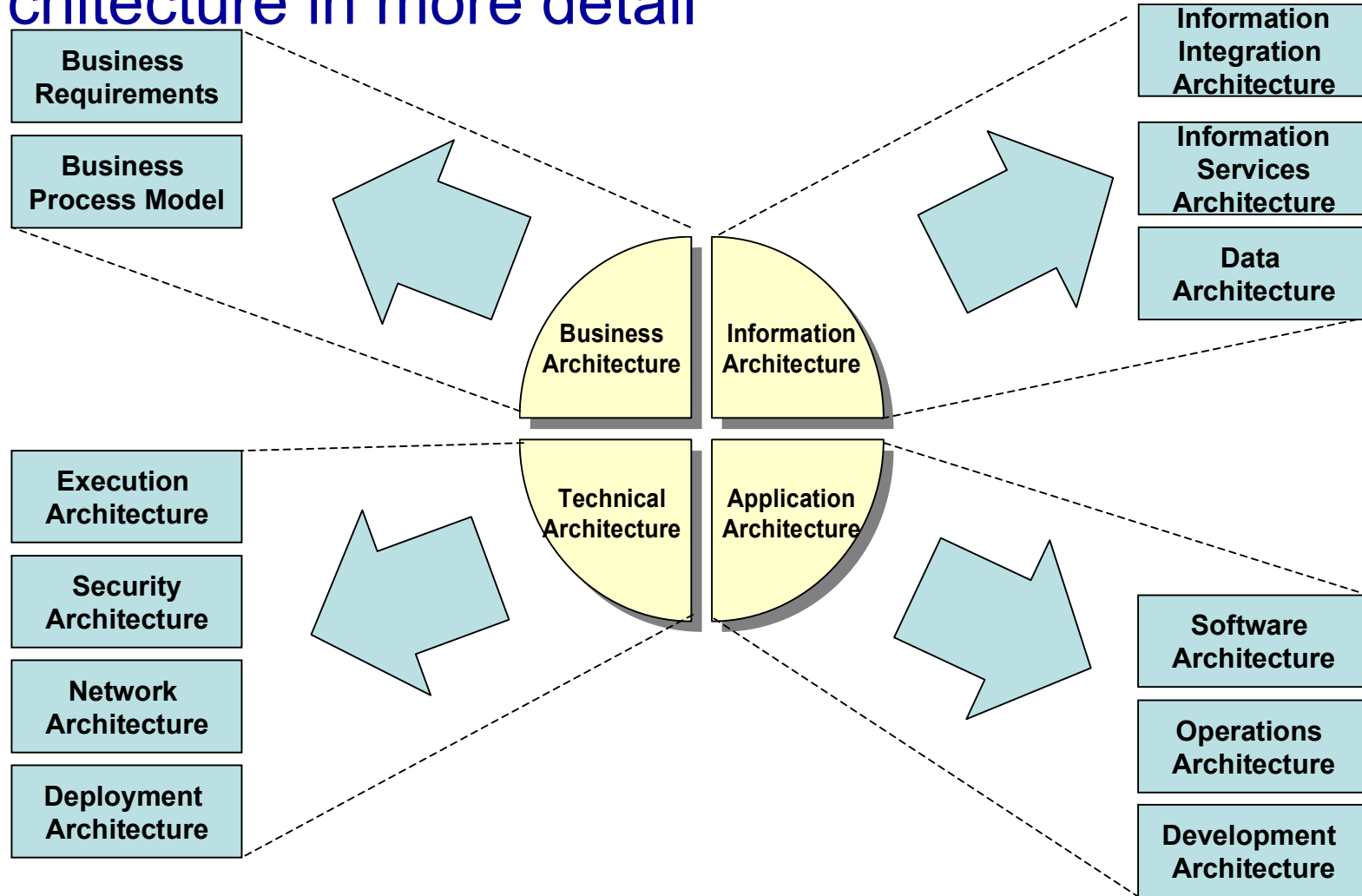


How could we manage the complexity

- Shape the complexity through architecture
- Break through application & team silo's by holding end to end process walkthroughs
 - Led by a joint design and architecture team
 - Major processes like Move to Sell
- Application and Enterprise Architectures



Architecture in more detail



- Not enough time to do everything we should

Example end to end flow (BPMN style)

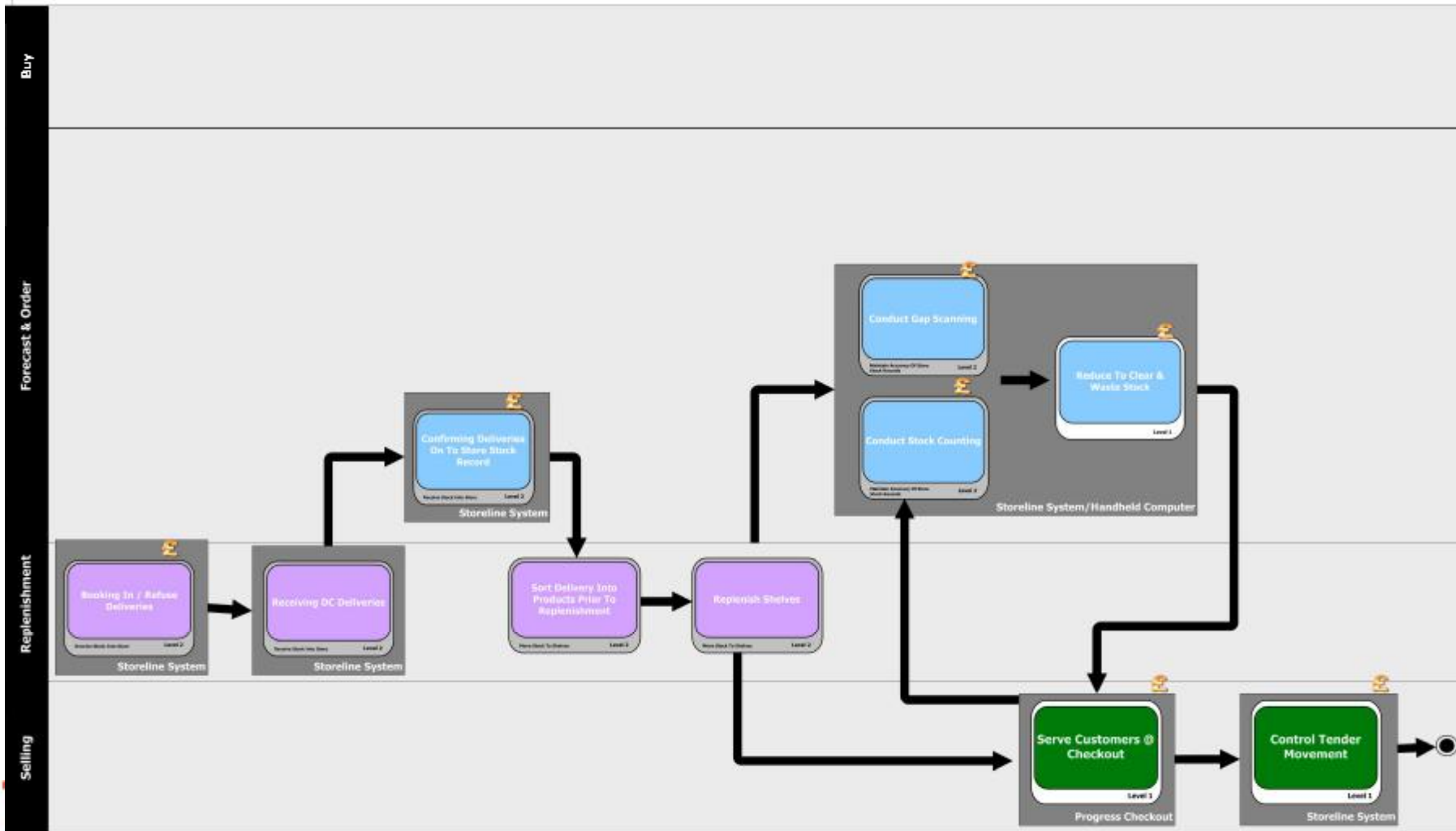
Operating Model End to End Process : Move and Sell

The process of replenishing stock of merchandised goods to the shelf to meet customer demand & display requirements.

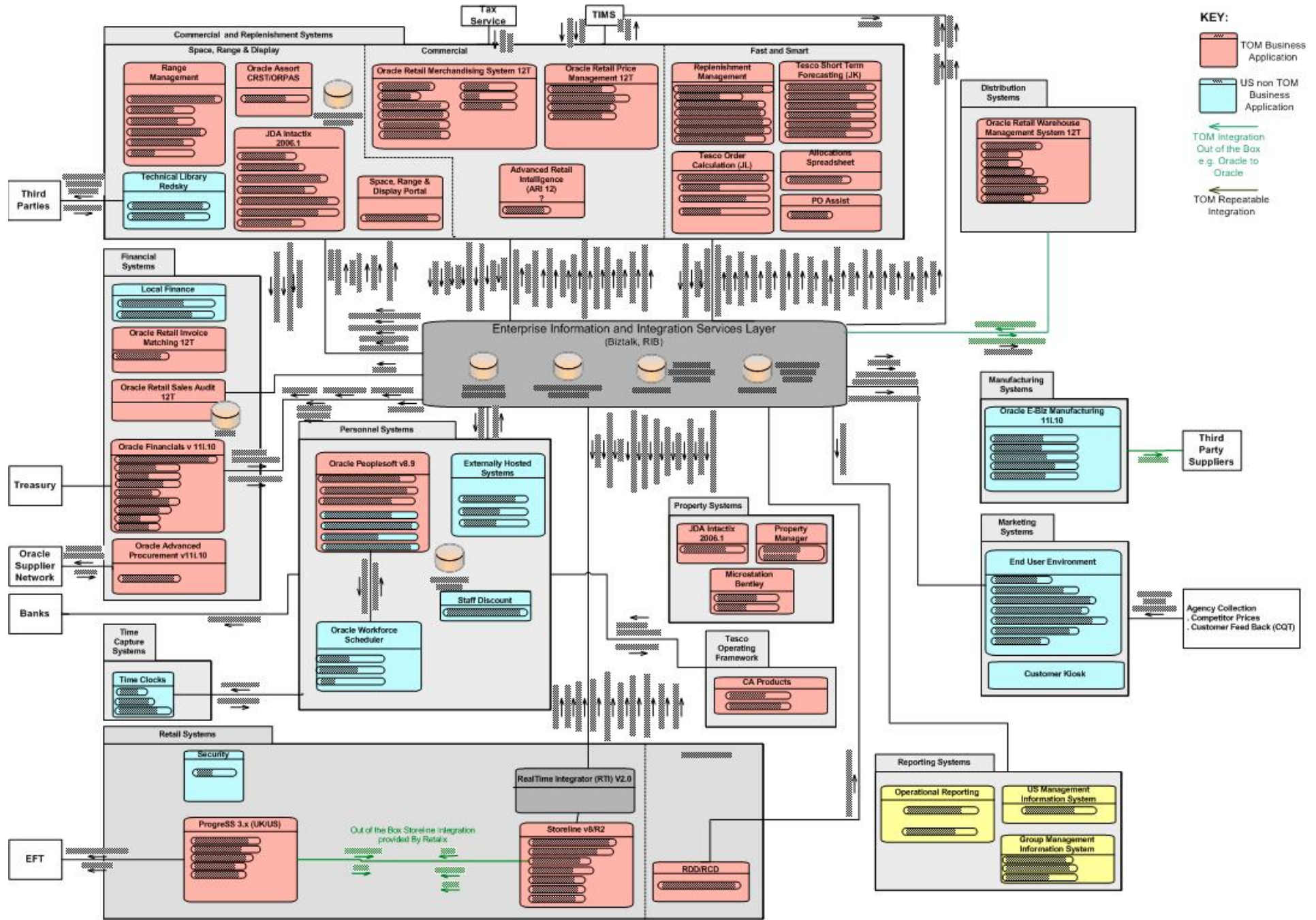
Assumptions

- Product is not on Promotion
- Product is not internationally sourced / exported
- Dot.Com is out of scope
- Coupons and Gift Vouchers are not within this process
- Loyalty Card is out of scope
- Deliveries to Store from DC will be accepted as correct

- Supplier is already set up on the system , Item – Supplier relationship already set up
- Locations (DC & Store) are built and set up on the system
- Planogram and Range have been produced and approved
- Product is Fresh, delivered through DC and Picked By Line
- Shelf Edge Label & Point Of Purchase material is already produced and on display
- People have been recruited , trained & scheduled within both DC & Store
- Till receipt already designed



The application and integration architecture



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What we deployed

- Phased Deployment—what we needed, when we needed it
 - Red Queen's Race to keep up
 - Heavy reliance on partner companies
- Early Phase Deployments
 - Network (trusted by Tesco UK, links to our IT & business process unit in Bangalore)
 - Email & Initial Office
 - Hosted Oracle Financials
 - Hosted Peoplesoft



What we deployed

- Later Phases
 - Repatriation of hosted systems (Financials & People)
 - Commercial Systems (Oracle Retail)
 - Manufacturing (Oracle e-Business)
 - Ordering (Oracle Retail & Tesco)
 - Retail Systems (Retailix)
 - Space, Range & Display (JDA Intactix & Tesco)
- End to End and User Acceptance in USA
(with some duplication in Bangalore)



A collaborative effort

- Tesco people from eight countries
- Partnered with IBM, Oracle, NCR and Retalix
- 18 processes and systems – 7 new to Tesco
- Tesco service center (HSC) to support finance, HR and IT back office



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Challenges

- We had a design for a highway, but did not have a design for the on-ramp.
 - Although we had systems and processes for a running business, we didn't have interim processes to support the business as they started up (to cover unfilled job roles, incompletely deployed systems etc).
 - Cutover design & planning is as important as design for the end game, although there is little lasting benefit (unless you have more than one business!)
- Many packages, many different representations for the same data object=complex integration
- Never manufactured our own products (in a central factory) before



More Challenges

- Tesco has never initiated a business as mature and automated as Fresh & Easy
 - Automated store ordering, 100% electronic communications with suppliers for order & invoice
 - A large number of “moving parts” that needed to be tested together, end to end.
- Needed to allow time and effort to pilot applications in a test-bed country (two deployments in rapid succession)



Lessons Learned

- **Complex deployments can be done quickly**
 - If you have packages for “commodity” functionality
 - And if you have well-documented processes
 - And you have a strong integration toolset and people skilled in that toolset and local design patterns
- **Get into end to end testing as soon as you can**
 - But try to do more than “happy path” straight through testing, identify common exceptions & errors (e. g. deletion of partially set up items)



What's next?

- Retrofit further developments of the operating model to the USA
 - Version upgrades, additional functionality
 - Remove the remaining interim “on-ramps” and “temporary diversions”.
- Refine the operating model
 - Further tailoring for the market
 - Move additional processes to Bangalore.
- Support ongoing expansion
 - DC's, Manufacturing, Stores.



Questions?



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