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# Universal Biosensors, Inc.

ARBN 121 559 993

## Bioshares Conference

*Presentation by Paul Wright, CEO*

July 2013



# Creating new technologies is hard...

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# A platform technology can help...

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## What is a Platform Technology?

*“A proprietary technological base from which various products can be developed without the expense / resource / effort usually required”*



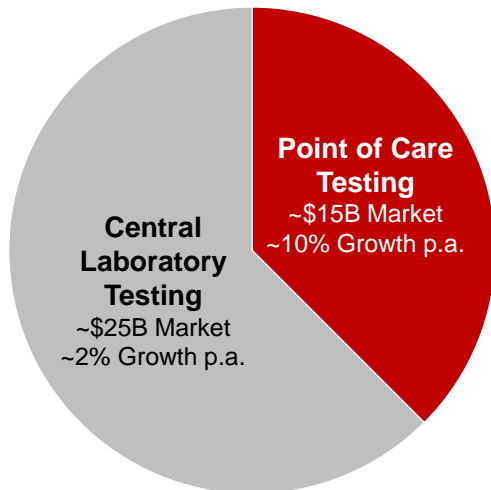
- Base from which to propagate new products
- Providing competitive advantage thru leverage of
  - historical investment
  - capability / know-how



# Background...point of care diagnostics



**Global In-Vitro Diagnostics Market**  
(2012 estimate)



## Point of Care Growth Drivers

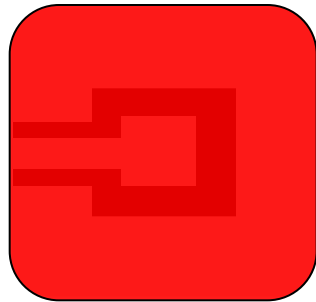
- ✓ Improved Health Economics (lower cost and better outcomes)
- ✓ Supports:
  - more timely diagnosis
  - increased frequency of testing for improved health outcomes
    - Management of chronic disease
    - Monitoring the effectiveness of a therapy
  - distributed healthcare for regional & remote areas as well as emerging economies

Source: Espicom, POC Diagnostics – 2011; Management Estimates

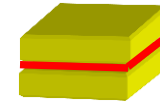


# UBI's platform technology

**Co-Planar Electrodes**



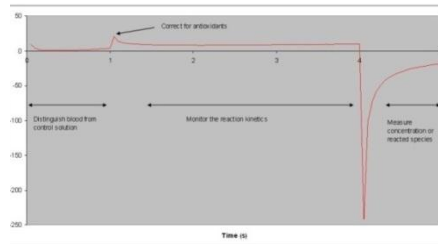
**Opposing Electrodes**



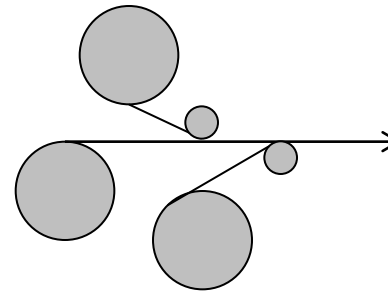
**Smaller sample volume**



**Greater accuracy**



**Simpler to manufacture**

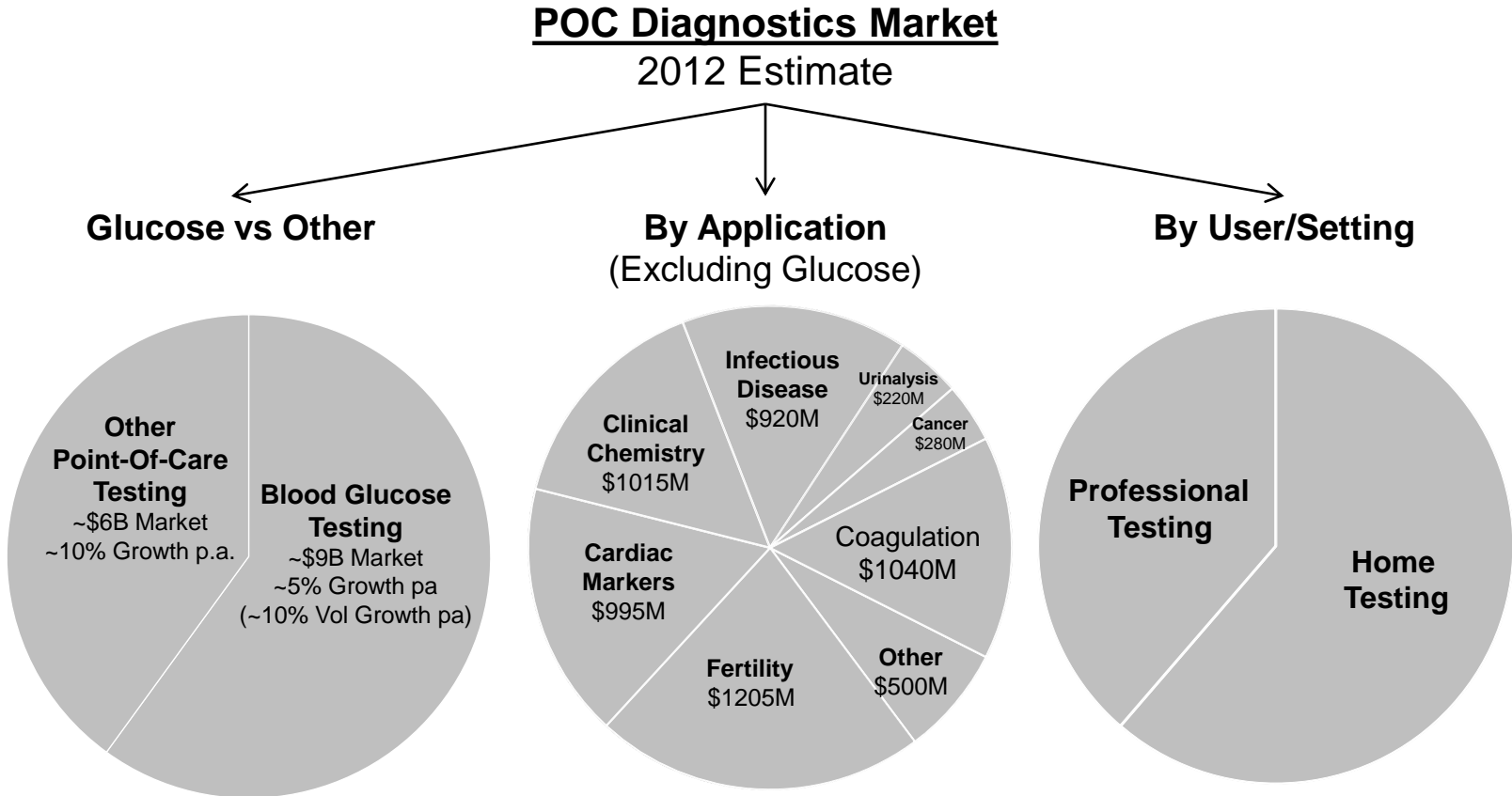


**Broad IP protection**





# UBI's platform opens many opportunities



Source: *Epicom, POC Diagnostics – 2011; Management Estimates; Global Data SMBG Market Study - Nov 2009; National Diabetes Information Clearing House - 2011*



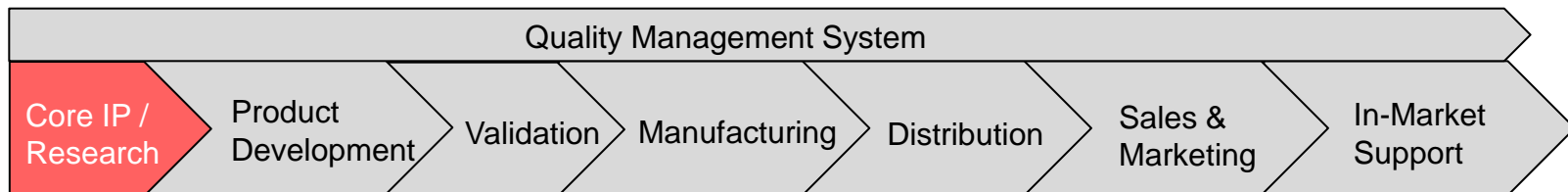
# Building the value of a platform

## 1. Target high value markets

- Large growing markets
- Opportunity for product differentiation
- Favourable competitive dynamics

## 2. Evolve the “technology platform” to a “business platform”

- Incremental steps
- Create re-usable experience, skills, tools, systems & infrastructure across the business value chain



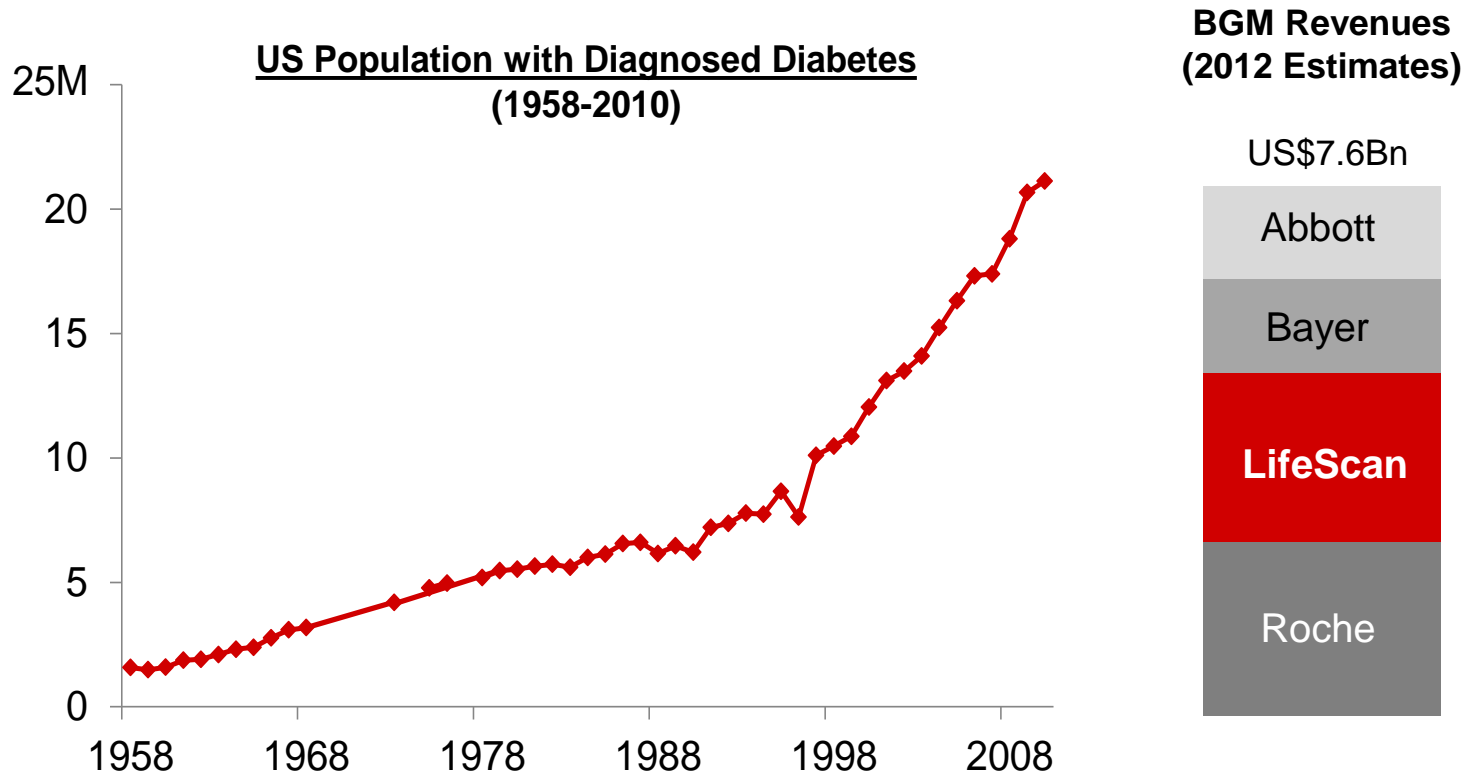
## 3. Maximise UBI’s share of the available value

- Meter & strip margins
- IP / market rights
- R&D investment
- Manufacturing rights
- Operational responsibilities
- Liability & risks, etc



# Stage 1– blood glucose monitoring (BGM)

*How does an R&D company access ~10% of the world's population?*



Source: Centre for Disease Control & Prevention - National Diabetes Surveillance System  
Company Financial Reports, analyst estimates, management estimates





# UBI's first global partnership

Diabetes market / customer access via industry leading player

Share in product success via ~1c per strip Service Fees

Rights to technology outside diabetes care

Non-exclusive strip manufacturing rights

R&D funding (fees and milestones)

No liability for meter manufacturing or design

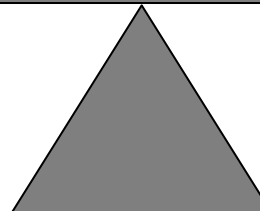


Ownership of core patents

Exclusive rights to exploit innovative new technology in competitive Diabetes space

Access to UBI's world class innovation capability

Control of glucose test strip manufacturing capability



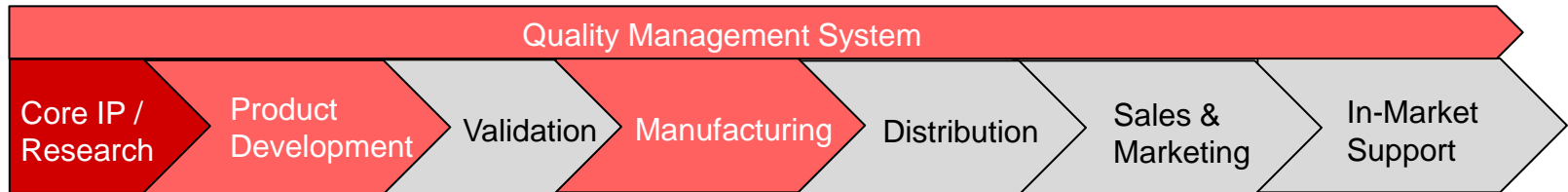


# BGM has added great value to the platform

## 1. Target high value markets

- ✓ \$9B blood glucose monitoring market
- ✓ Exposure to consumer / self testing markets
- ✓ ~10% CAGR in testing volume driven by worldwide growth in diabetes

## 2. Evolve the “technology platform” to a “business platform”



- ✓ Added capability to develop a commercial, regulatory compliant, diagnostics product with competitive performance & cost
- ✓ Created low-cost, scale-appropriate production platform
- ✓ Gained handheld analyser technology & development experience
- ✓ Established FDA QSR / ISO13485 Quality Management System

## 3. Maximise UBI’s share of the available value

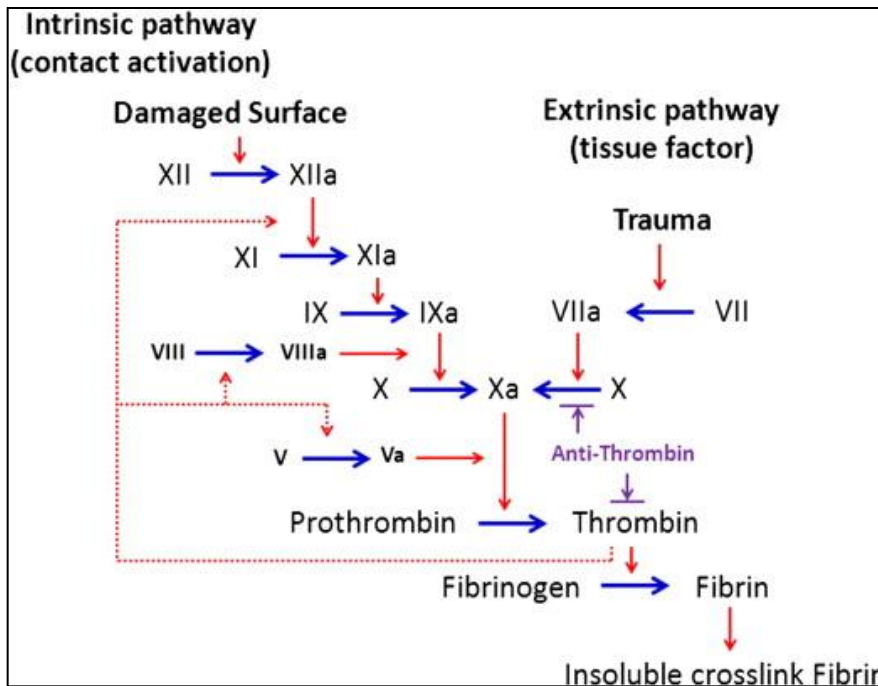
- ✓ ~US1c per test strip sold by LifeScan
- ✓ Strip manufacturing & supply agreement
- ✓ Ongoing contract R&D relationship
- ✓ Technology rights for all applications outside diabetes



# Stage 2 - Coagulation testing: background

*Because the clotting cascade is complex and important...*

*...many coagulation tests are carried out today.*



- Activated Clotting Time
- Activated Partial Thrombin Time
- D-Dimer
- Direct Thrombin Inhibitors
- Ecarin Clotting Time
- Enoxaparin Clotting Time
- Factor V Leiden
- Factor Xa
- Fibrin Degradation Product
- Fibrinogen
- Heparin
- Initial Thrombin Formation
- Prothrombin Induced Clotting Time
- PT-INR
- etc

## POC Coagulation testing market

- >\$1 Billion,
- >10% annual growth



# Stage 2 - UBI's second global partnership

Access to global POC  
Coagulation testing market  
via world leader

Contribution to R&D costs

Exclusive strip manufacturing  
rights

Share in upside profits

Validation of technology /  
business by a world leader

Retained rights to exploit  
Patient-Self test market



Exclusive rights to exploit  
world leading POC  
Coagulation testing technology

Suite of new POC Coagulation  
testing products developed to  
Siemens specification



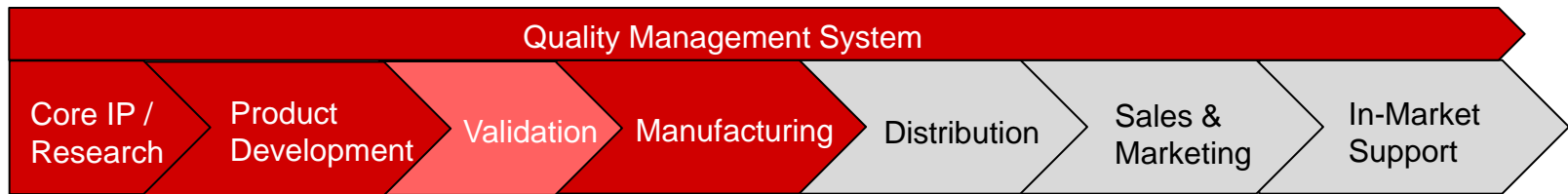


# Coagulation adds more value to the platform

## 1. Target high value markets

- ✓ \$1B POC coagulation testing market
- ✓ Exposure to hospital and other professional POC settings
- ✓ >\$5 per test per week reimbursement environment (USA)

## 2. Evolve the “technology platform” to a “business platform”



- ✓ Increased sophistication and capability of core strip technology
- ✓ Added non-glucose biosensor manufacturing capability
- ✓ Added capability in analyser development for professional use
- ✓ Added / extend clinical trials experience
- ✓ Extended internal systems & processes to handle multiple products

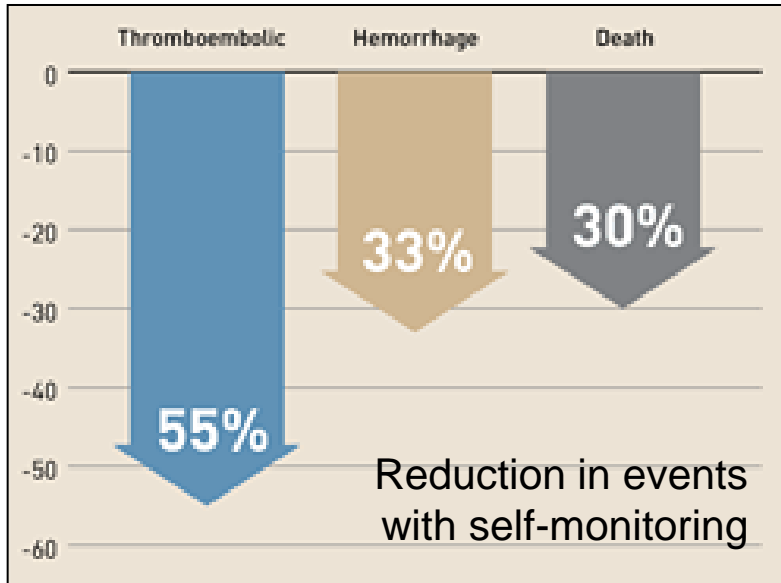
## 3. Maximise UBI’s share of the available value

- ✓ \$0.50-\$1.50 per test strip
- ✓ Exclusive manufacturing rights
- ✓ Profit Share mechanism to share in upside potential



# Where next? PT/INR patient self-testing

- Prothrombin Time (PT) measures the clotting tendency of blood and is reported as an International Normalised Ratio (INR)
- Regular, on-going INR testing is used to ensure that Warfarin patients remain in the Target Therapeutic Range (TTR)



Heneghan C, Alonso-Coello P, Garcia-Alamino JM, et al. Self-monitoring of oral anticoagulation: a systematic review and meta-analysis. *Lancet*. 2006;367:404-411.

- Regular self-testing may improve patient outcomes as patients remain within TTR longer
- Accurate, simple, low-cost tools are required for self-testing



# Patient self-testing – the US Model..

***Patient Self Testing in the US is now supported by the Independent Diagnostic Testing Facilities (IDTF) model...***



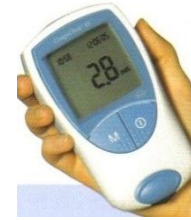
Physician identifies appropriate patient



Physician prescribes home testing



IDTF trains & provides monthly supplies for 4 tests / month to patient



Patient tests at home



Patient calls results weekly to IDTF Call Center



IDTF Call Center reports results to physician



Physician manages therapy, schedules check-ups as needed, & sends to lab (average 4/year)



Physician submits for reimbursement for: review, interpretation & management of 4 test / month & office visit



# PST PT/INR has strong drivers for growth

## POC PT-INR testing improves health economics

- POC testing enables timely dosage adjustment and more time spent in the Target Therapeutic Range
- Fewer clotting / bleeding events = lower treatment costs

## Self testing works

- PT/INR self-testers experience fewer clotting & bleeding events

**Growth Opportunity**

*>15% CAGR*

## Warfarin use continuing

- Due to low cost, warfarin use continues
- Typically, ~1% of the population on warfarin

## Expanded reimbursement

- 2008: US Medicare reimbursement for Warfarin expanded to:
  - Atrial fibrillation (~2m US patients)
  - Venous thromboembolism (~2m US patients)
  - Mechanical heart valves (~400k US patients)
- 2009: Medicare reimbursement: \$5.53 per test



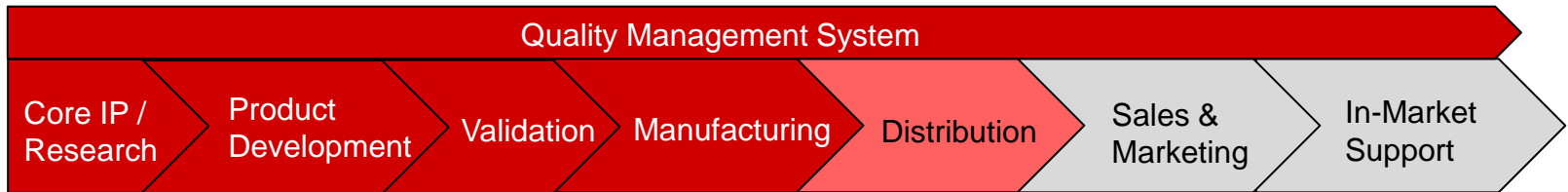


# PST PT-INR will add further value...

## 1. Target high value markets

- ✓ Fastest growing segment of PT-INR market (>15% CAGR)
- ✓ Unmet customer needs
- ✓ Higher market price per strip

## 2. Evolve the “technology platform” to a “business platform”



- ✓ Add product lifecycle management
- ✓ Add product supply (strip & meter)
- ✓ Add distributor management capability
- ✓ Extend clinical trials experience

## 3. Maximise UBI’s share of the available value

- ✓ Strip R&D investment already made
- ✓ Full IP ownership
- ✓ Competitive offering



# PST PT-INR returns justify the risks...

## Opportunity

- ✓ Large, growing market
- ✓ Limited competitive offerings
- ✓ Ability to deliver a differentiated product
- ✓ Attractive margin potential
- ✓ Modest incremental investment

## Incremental Risks

- Route-to-market effectiveness
  
- Full product / system ownership

## Risk Mitigation

- ✓ Low incremental investment
- ✓ Manage specialised distributors trading risk / responsibilities against margin
  
- ✓ High calibre product design & testing
- ✓ Managed roll-out
- ✓ Appropriate insurances



## Financial Assessment

- Scenario modelling
- Cash flow forecasting
- IRR, NPV, etc



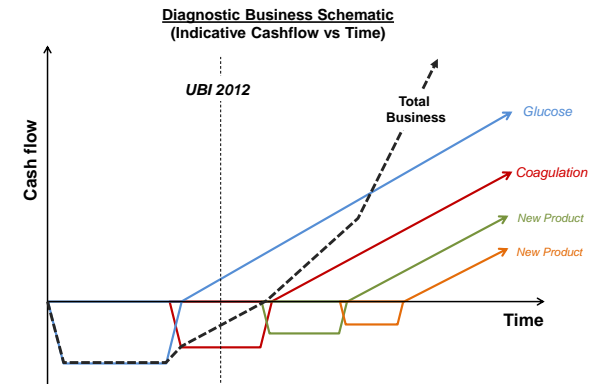
# Building out a powerful Business Platform

Moving up the value chain provides UBI with the technology, experience and routes-to-market to commercialise future products...

- CRP
- D-Dimer
- Other immunoassay-based tests
- Rapid, low-cost DNA/RNA tests



***Driving towards UBI's mission to become a leader in POC diagnostics***





# Key take away messages

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- **A “technology platform” provides an important source of leverage**
- **A “technology platform” can be evolved into a more valuable “business platform”**
  - ✓ Adding new capabilities
  - ✓ Creating opportunity for future re-use and leverage
- **The risk / return equation needs to be evaluated at each step**
  - ✓ Take incremental steps
  - ✓ Apply risk management thinking continuously
  - ✓ Assess financial merits of each step



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