Home Office

Scientific Development Branch

Protecting the public using science and technology

A UK Perspective

Alan Pratt

Director, Home Office Scientific Development Branch

HOSDB

- Unique team of scientists and engineers at the heart of government
- Supporting
  - Policy
  - Law enforcement
  - Counter terrorism
  - Offender management
  - Immigration
- 23 technical programmes
- 160 projects
- 250 staff
- £25m per year

Sandridge -
St Albans, Herts

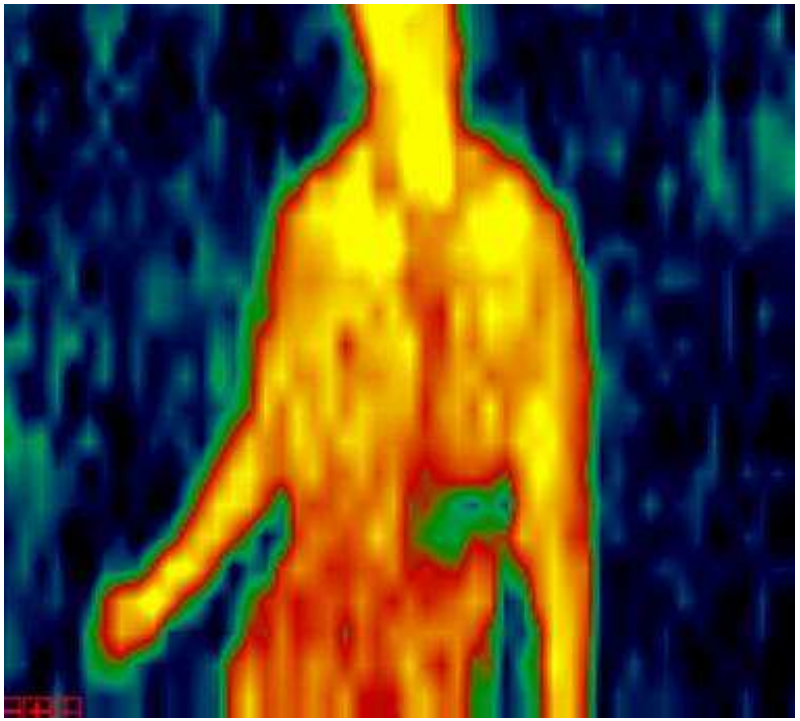
Langhurst-
Horsham, Sussex

1. Unrivalled scientific advice

- Impartial and accurate technical advice
- Setting technical standards
- Internationally renowned

2. Innovative technical solutions

- We develop new technologies where off-the-shelf equipment is not available
- Broker between commercial manufacturers and customers



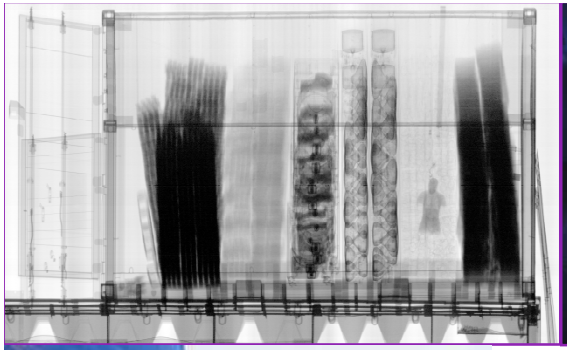
3. Frontline support

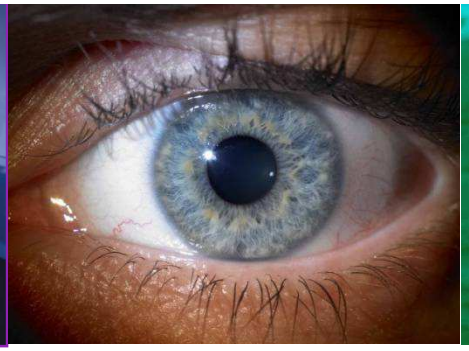
- Hands-on technical support for security operations
- Central stock of search and surveillance equipment
- Support over 100 events a year

Counter Drugs Technologies
Biometrics
Detection & Vision Systems
Search Support
Police Weaponry
CBRN
Security Equipment
Transport Security
Operational Support
Offender Management Technologies
Immigration Management Technologies
Road Policing Enforcement
Road Policing Equipment
Physical Security Training
Police Protection
Fingerprint & footwear forensics
Security Reviews
Video Evidence Analysis
Covert Surveillance
Counter Terrorist Technologies
Explosion & Ballistic Protection

ISSUES IN EXPRESSING NEEDS AND ACHIEVING REAL SECURITY BENEFITS

Home Office





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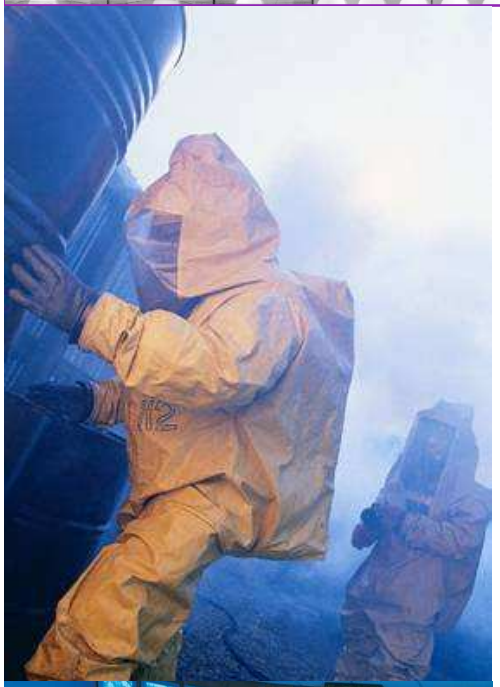
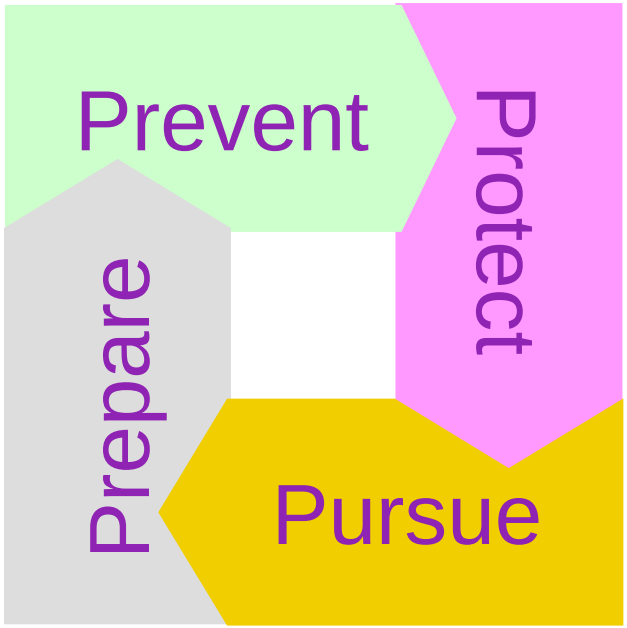
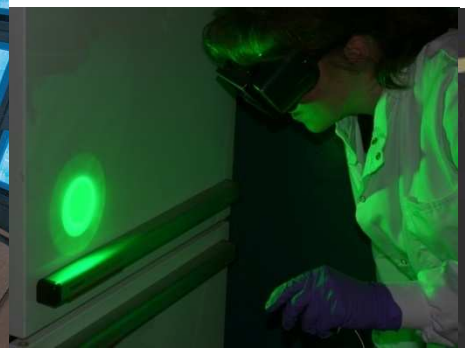


Prevent
Protect
Prepare
Pursue



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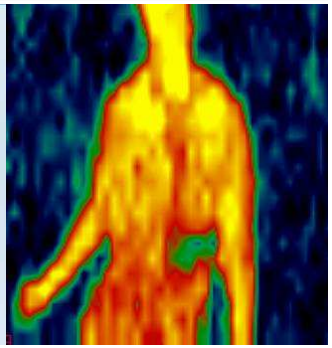
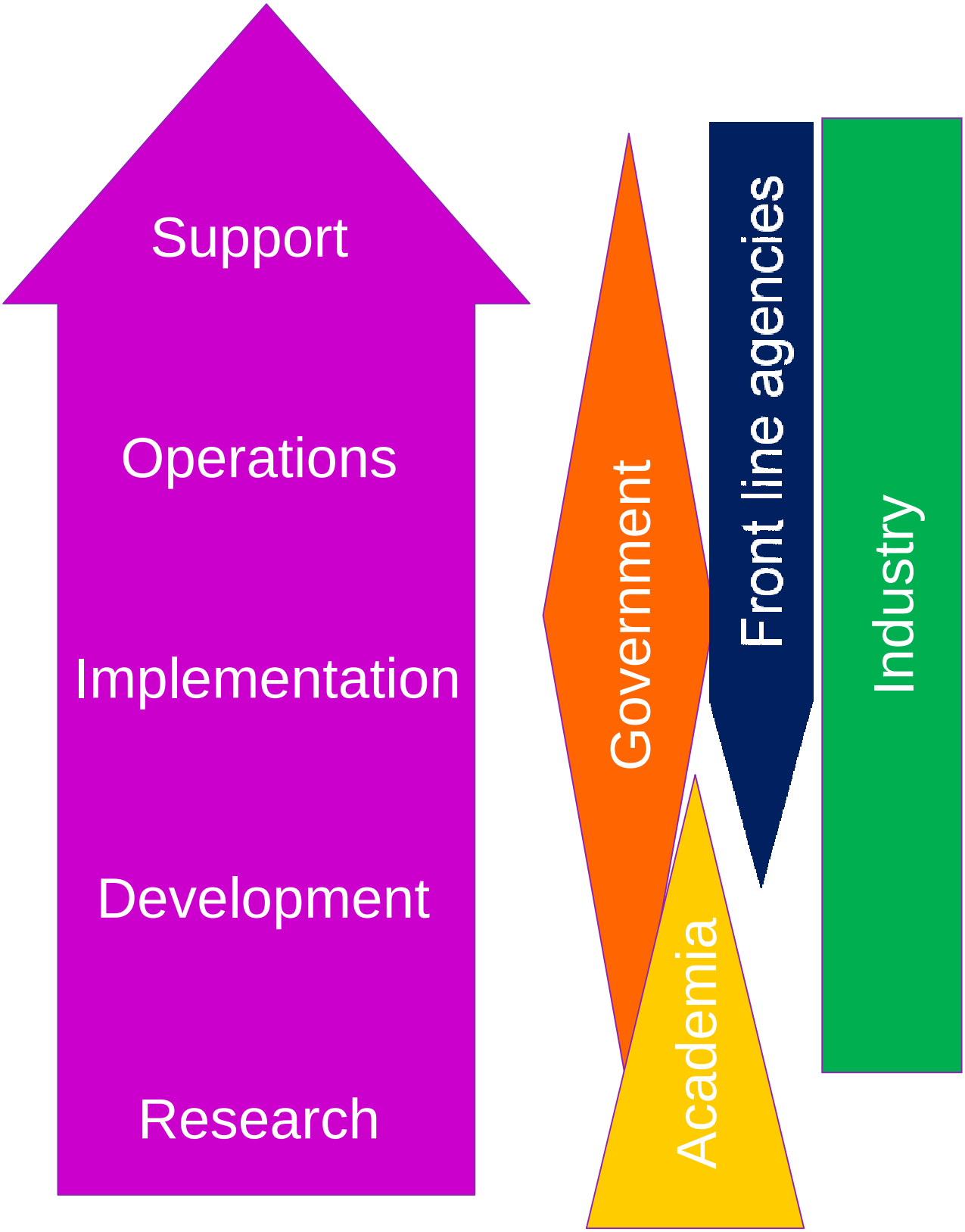
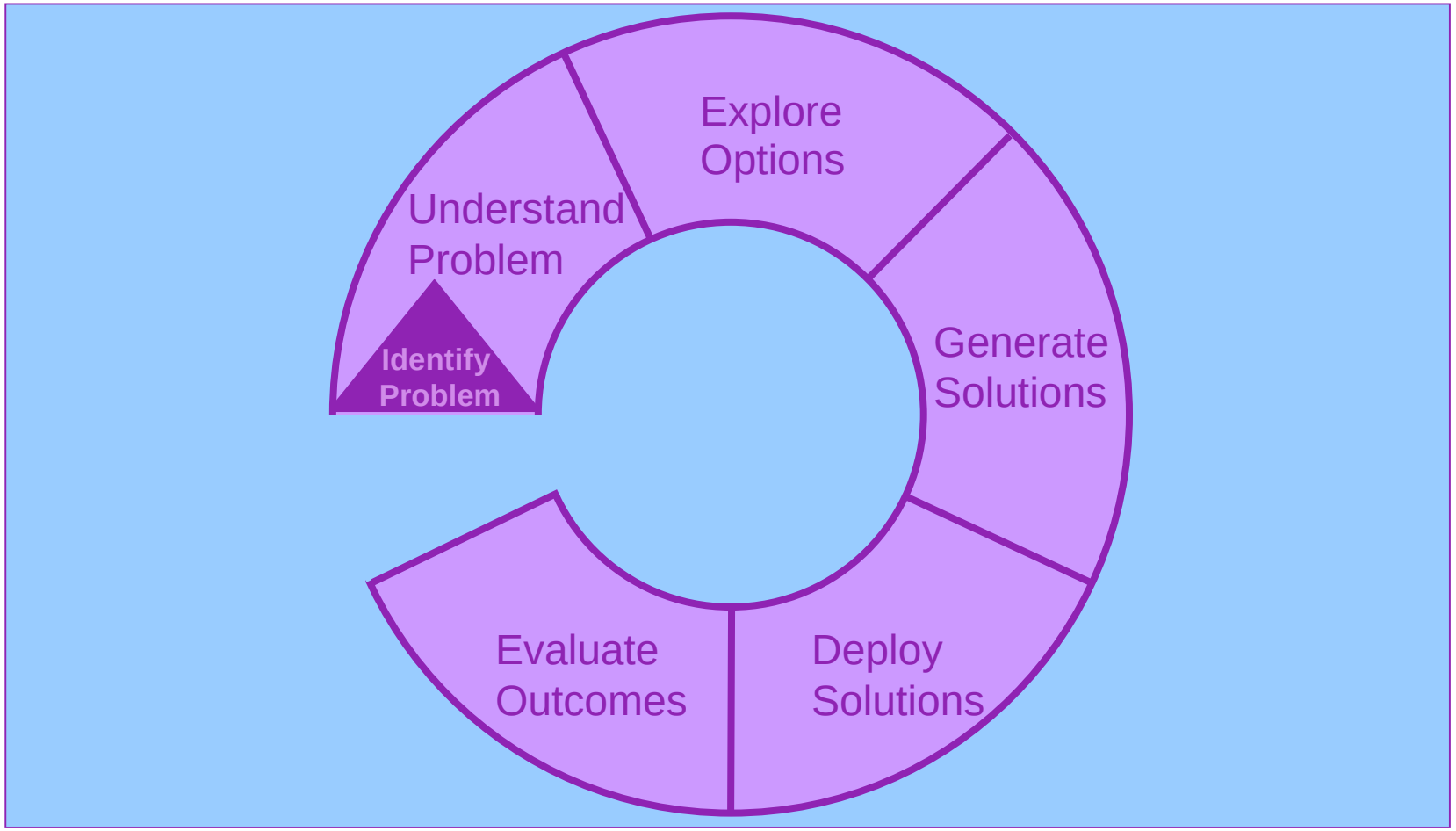
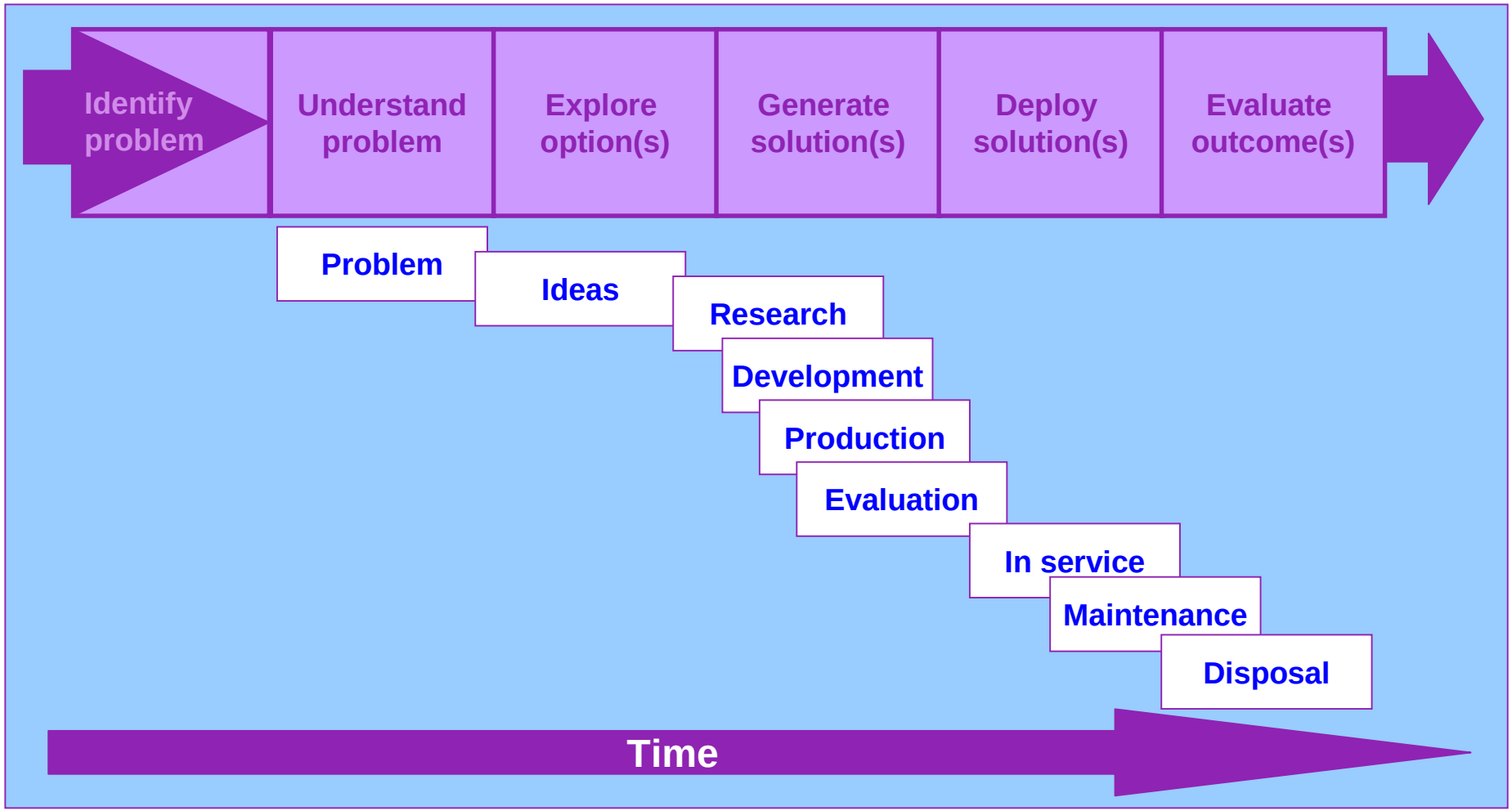



Support
Operations
Implementation
Development
Research
Government
Front line agencies
Industry
Academia

Real Life Cycle



Real lifecycle



SCIENTIFIC DEVELOPMENT BRANCH
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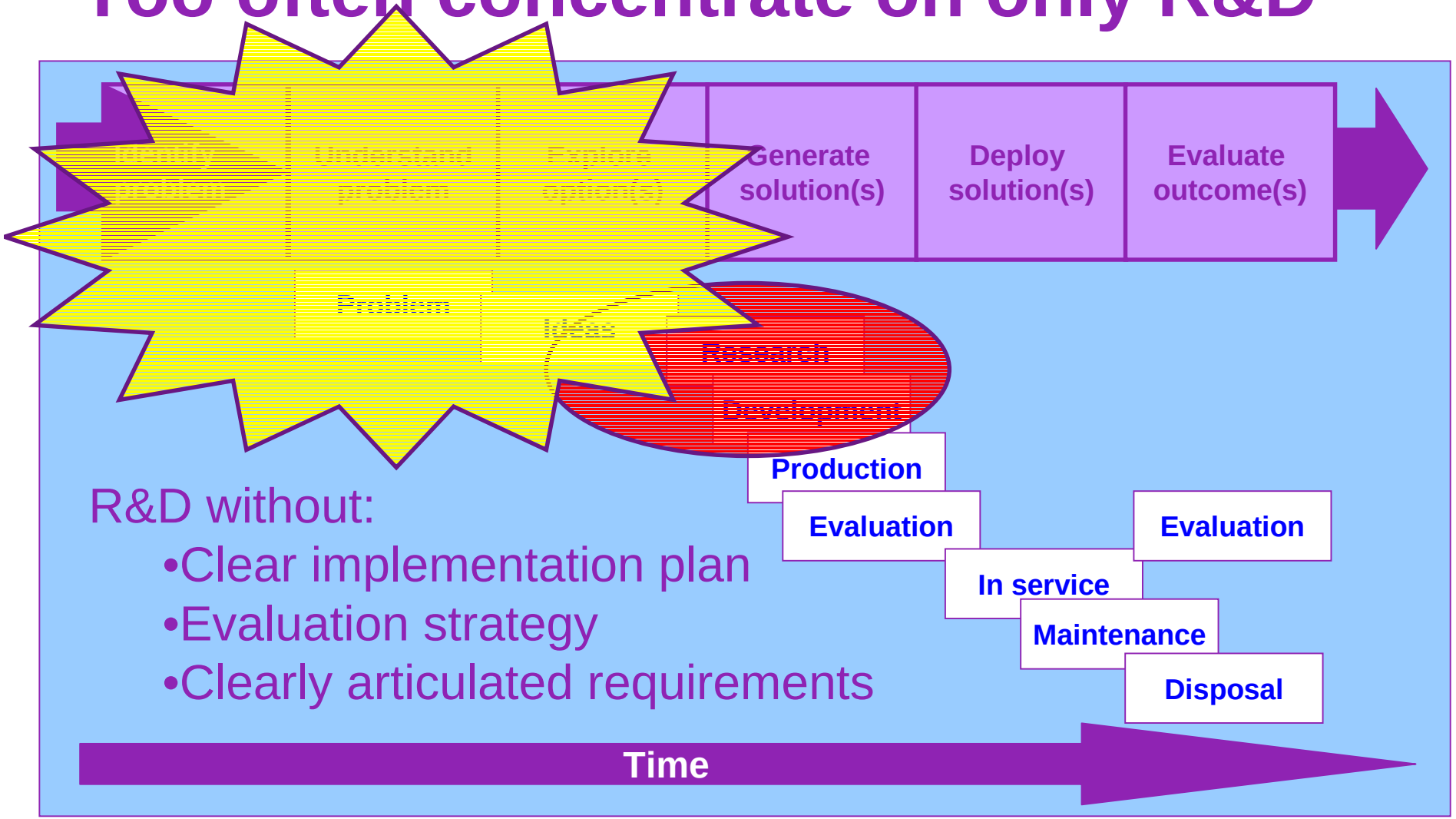
Too often concentrate on only R&D



R&D without:

- Clear implementation plan
- Evaluation strategy
- Clearly articulated requirements

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Understand operational needs

- Understand the context
  - strategies, policies and priorities
- Close contact with real users
  - What are their real problems? (don't focus on solutions)
  - What do they already have?
- Embed senior users
  - User groups, Project boards, police advisors
- First hand experience
  - Scientists and engineers on operations, 4 a.m., winter rain

Articulate needs

- Capture the essential operational goals

- For specific projects
  - Detailed Operational Requirements
  - Acceptance criteria (operational)
  - Implementation plans

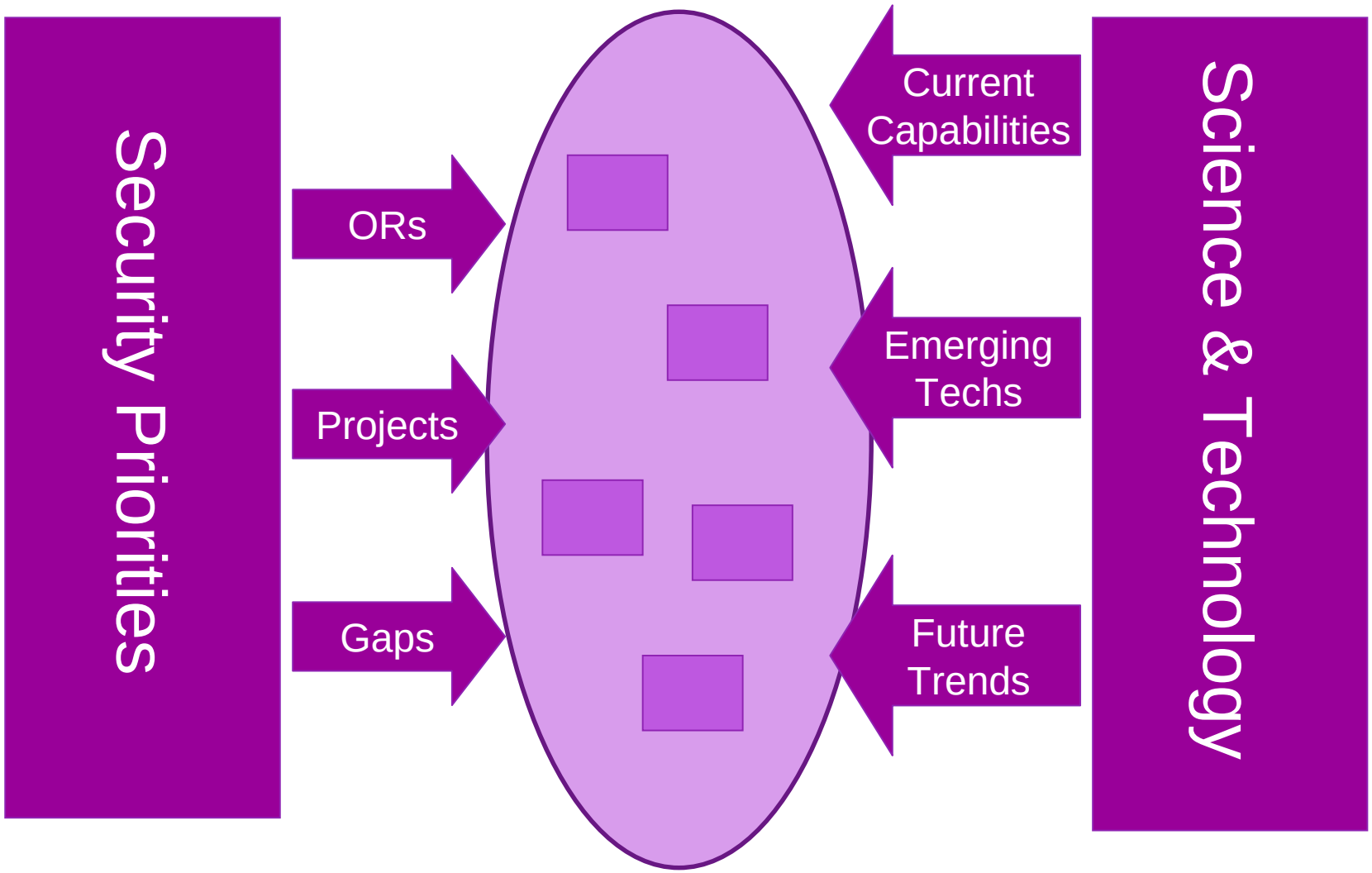
- For general needs
  - Specify where most help is needed
  - Develop strategies to guide investment
  - Capability maps

Translate and Communicate needs

- Translate specific operational requirements into
  - Technical specifications (projects)
  - Scientific and technical challenges
- Create a compelling case
- Tell people!
  - Consistently
  - Clearly
  - Through multiple channels

Academia
Providers
Industry
S&T
Social
Policy
Context
Investigate current & future
Assess potential impact
Likelihood
Severity
Risks
Benefits
•Inform
•Recommend
•Act
Identify Issues
Current concerns
Expert groups
Brainstorming
Horizon scanning

Knowledge Framework



What more can we do together ?

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Development Branch

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