

## **JOIN IN!**

Joint Programming – Coordinating Research in Europe  
New Opportunities for the Austrian Research Community  
28 September 2011

# **JPI Antimicrobial Resistance**

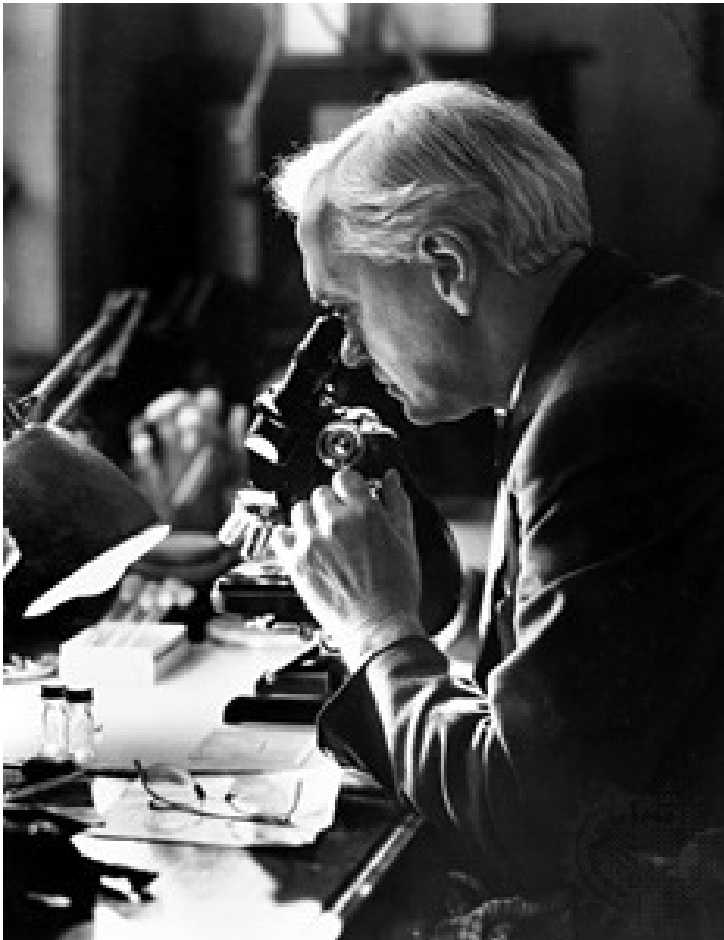
## **The microbial challenge – An emerging threat to human health**

**Professor Mats Ulfendahl, chair Management Board**  
Secretary General, Swedish Research Council  
Stockholm, Sweden  
[mats.ulfendahl@vr.se](mailto:mats.ulfendahl@vr.se)



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Joint Programming Initiative – *Antimicrobial Resistance*



Alexander Flemming

*The time may come when penicillin can be bought by anyone in the shops. Then there is the danger that the ignorant man may easily underdose himself **and by exposing his microbes to non-lethal quantities of the drug make them resistant.***

HOME > HEALTH > HEALTH NEWS

# Millions 'wrongly taking antibiotics' for coughs and colds

Up to 10 million people in Britain were prescribed antibiotics for coughs and colds last year despite official warnings they should be only be used for serious illnesses, a study has found.

By Rebecca Smith, Medical Editor  
Published: 3:45PM BST 23 Apr 2010



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Foto: Scanpix

## Resistente bakterier fra landbruget truer folkesundheden

22-04-2010 06:13

Landbruget er storleverandør af resistente bakterier, som kan gøre os alvorligt syge, fordi der ikke findes nogen behandling, som kan slå sygdommene ned.

Baggrunden er, at landbrugets brug af antibiotika er i eksplosiv vækst og aldrig har været større end nu. Overforbrug af antibiotika gør dyrenes bakterier resistente, og disse bakterier risikerer vi at blive smittet med, når vi spiser kød - især svinekød men også fjerkræ - og også ved social kontakt mellem mennesker.

På bare et år er stigningen i antibiotikaforbruget steget med over ti pct., viser nye tal fra DTU Veterinærinstituttets database Vetstat. Det skriver Børsen FødevareSundhed torsdag.

"Vi styrer lige mod katastrofen, hvis vi ikke gør noget radikalt her og nu," siger én af Danmarks førende eksperter i klinisk mikrobiologi, professor, overlæge Hans Jørn Kolmos, Odense Universitetshospital/Syddansk Universitet. Han mener, at landbruget fuldstændigt

### Relateret indhold

#### Borsen.dk

25/02 Forebyggelse sparket mange år tilbage

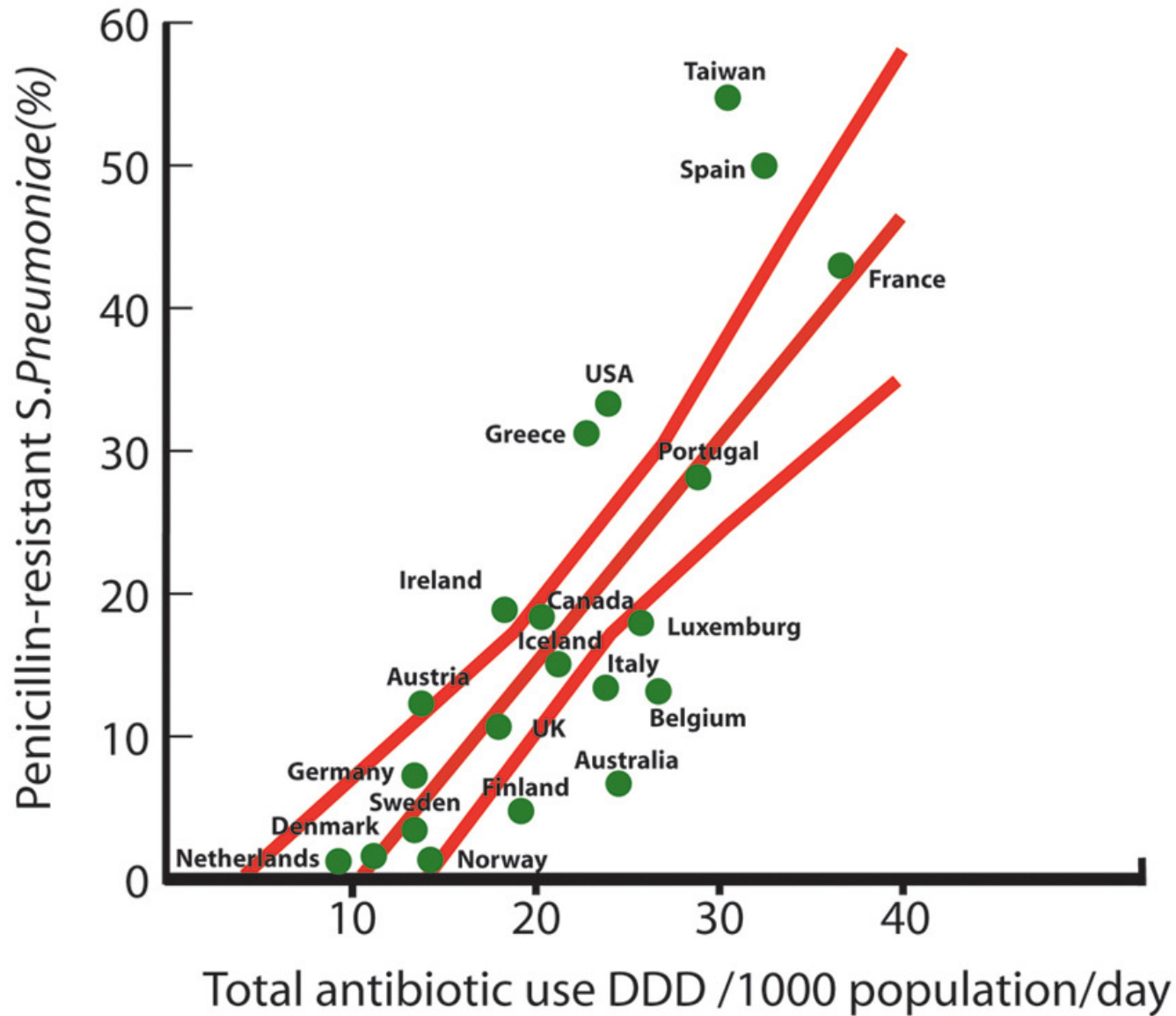
08/01 Motionsbølge med alvorlig skyggeside

#### Eksterne links

► [Læs hele artiklen i Den Elektroniske Avis](#)

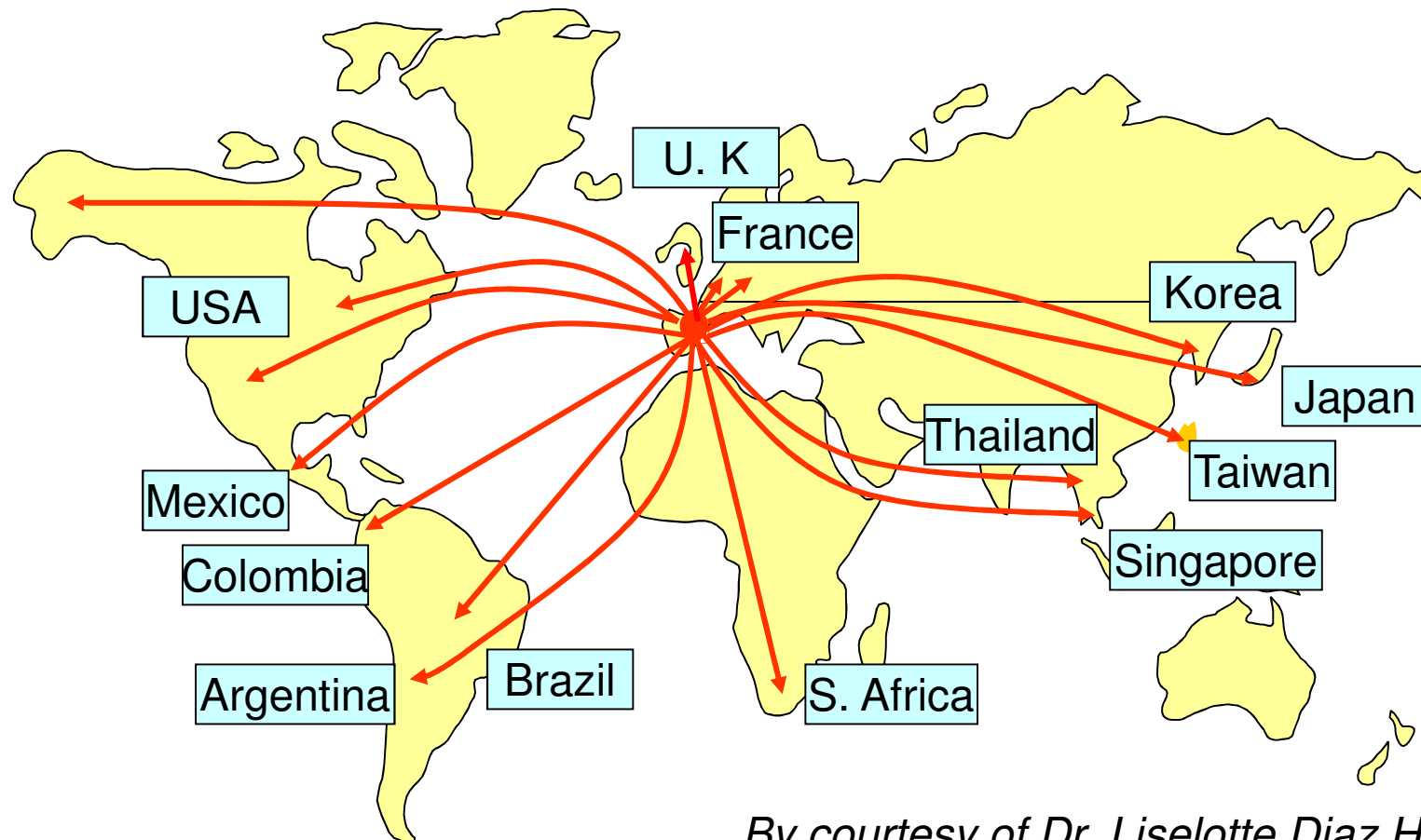


***“The more we use them, the more we lose them...”***



# A global problem!

## Worldwide spread of the 23F clone of penicillin resistant pneumococci



*By courtesy of Dr. Liselotte Diaz Högberg*

Antimicrobial resistant strains are everywhere,  
even in healthy people

Between 60 and 70 per cent of us have antimicrobial resistant bacteria on our skin, in our intestines, in our throats etc.



## Facts:

- Antibiotics used excessively
- Increasing number of resistant strains
- Great societal costs
- Less drugs being produced
- Global problem

Medical challenges

Economic and societal challenges

Industrial challenges

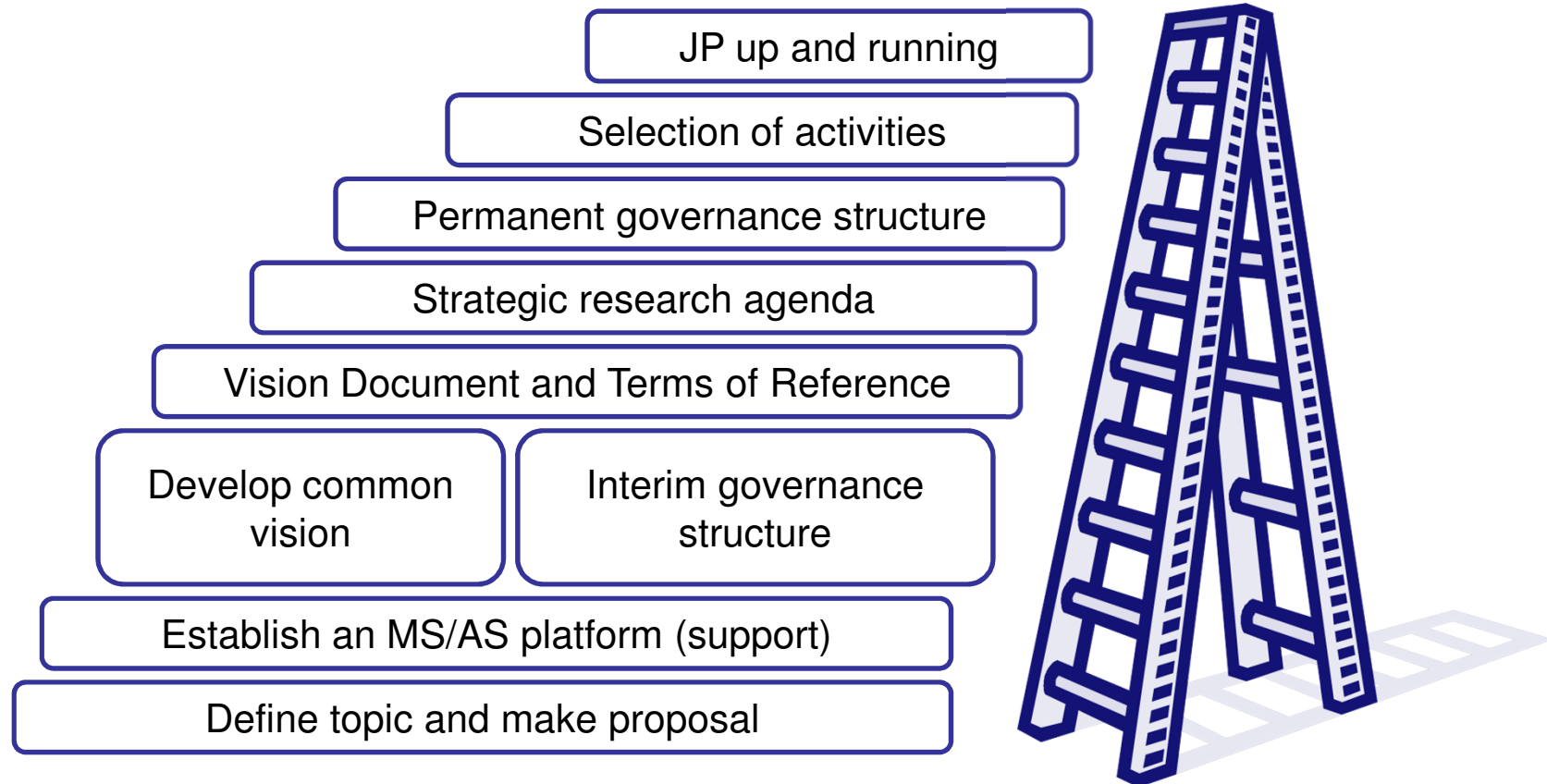
*Joint Programming Initiative!*

# “Road map”

## First Management Board meeting in Brussels on 9 December 2010

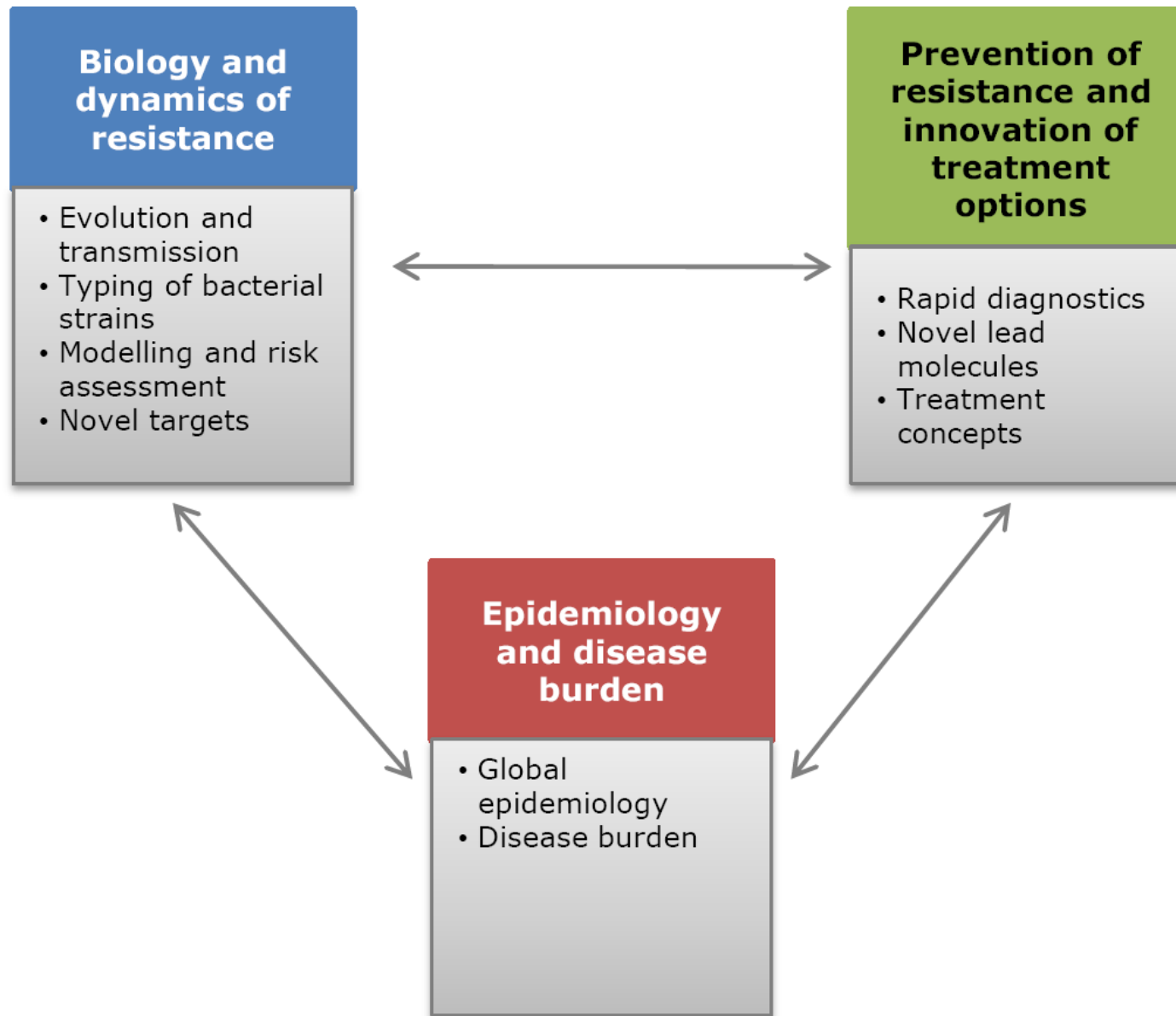
- Scope of JPI AMR decided
  - “...the focus of this JPI should be on **bacterial antibiotic resistance** and **human medicine** and that both basic and applied research is relevant. However, veterinary medicine with relevance to humans should be included and no areas or pathogens should specifically be excluded at this stage.
- Terms of Reference adopted
- First mapping exercise completed
- Workshop in preparation for the Strategic Research Agenda
- Scientific Advisory Board appointed
- Stakeholders Advisory Board being nominated

# Implementation of JPI AMR



## **17 member/associated states participating**

Belgium	Norway
Czech Republic	Poland
Denmark	Romania
Finland	Spain
France	Sweden
Germany	Switzerland
Greece	Turkey
Italy	United Kingdom
The Netherlands	



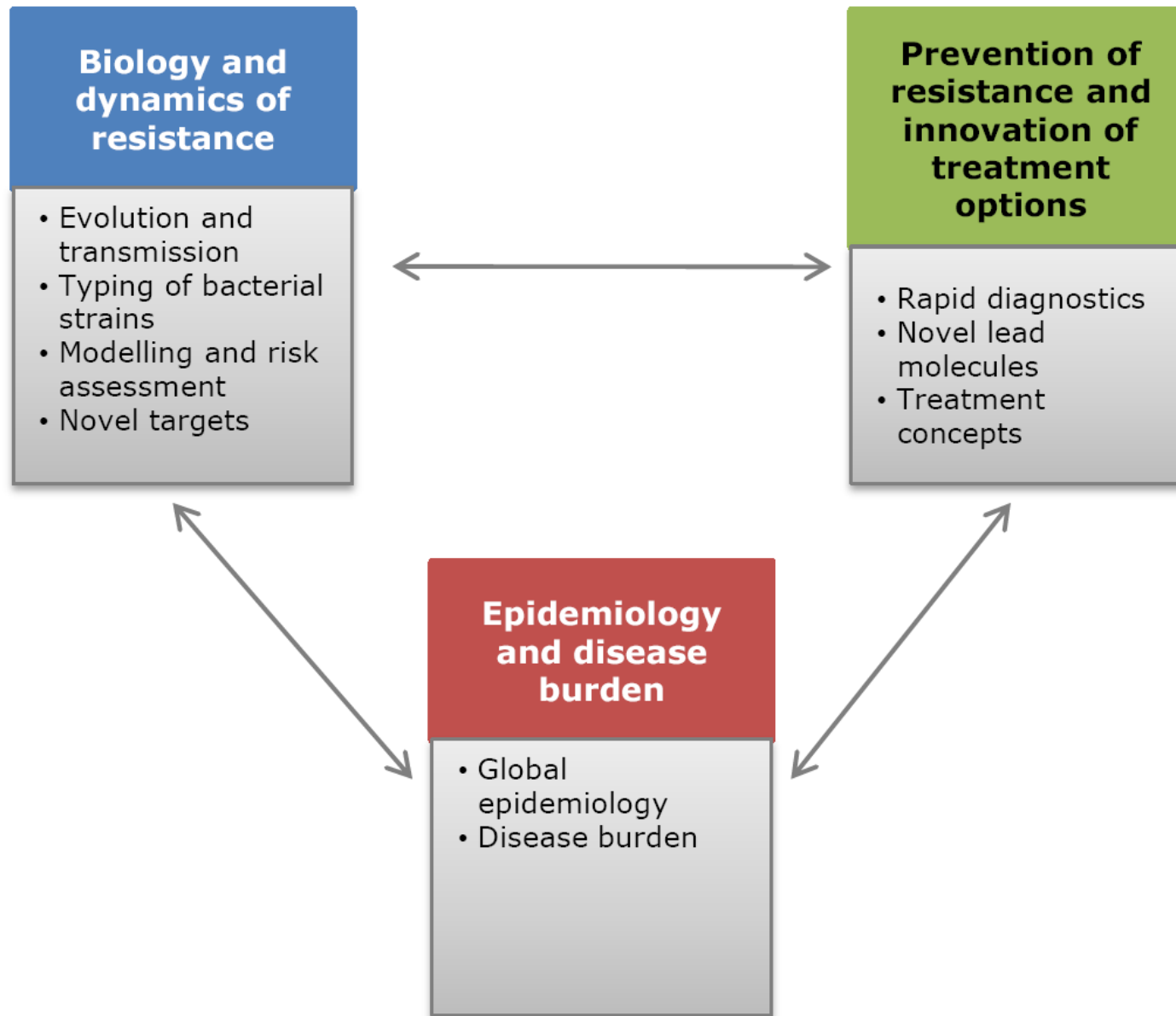
## Biology and dynamics of resistance

- Evolution and transmission
- Typing of bacterial strains
- Modelling and risk assessment
- Novel targets

## **Biology and dynamics of resistance**

*To understand the underlying biology of the factors influencing the emergence and spread of resistant infectious micro-organisms.*



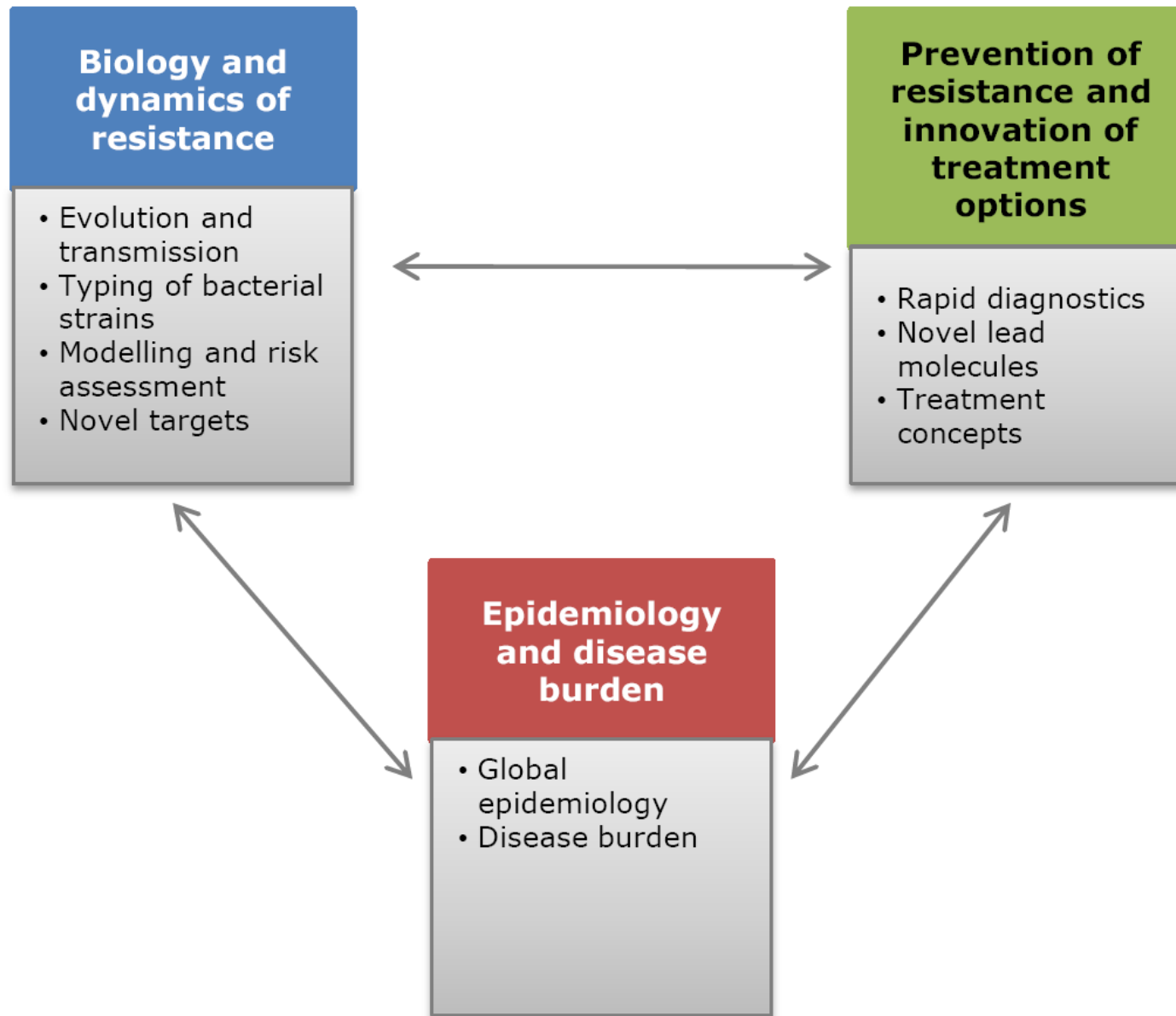


## **Prevention of resistance and innovation of treatment options**

*To reduce the need for antibiotics through prevention, refined and alternative treatments, and rapid diagnostics of pathogens and resistance patterns.*

### **Prevention of resistance and innovation of treatment options**

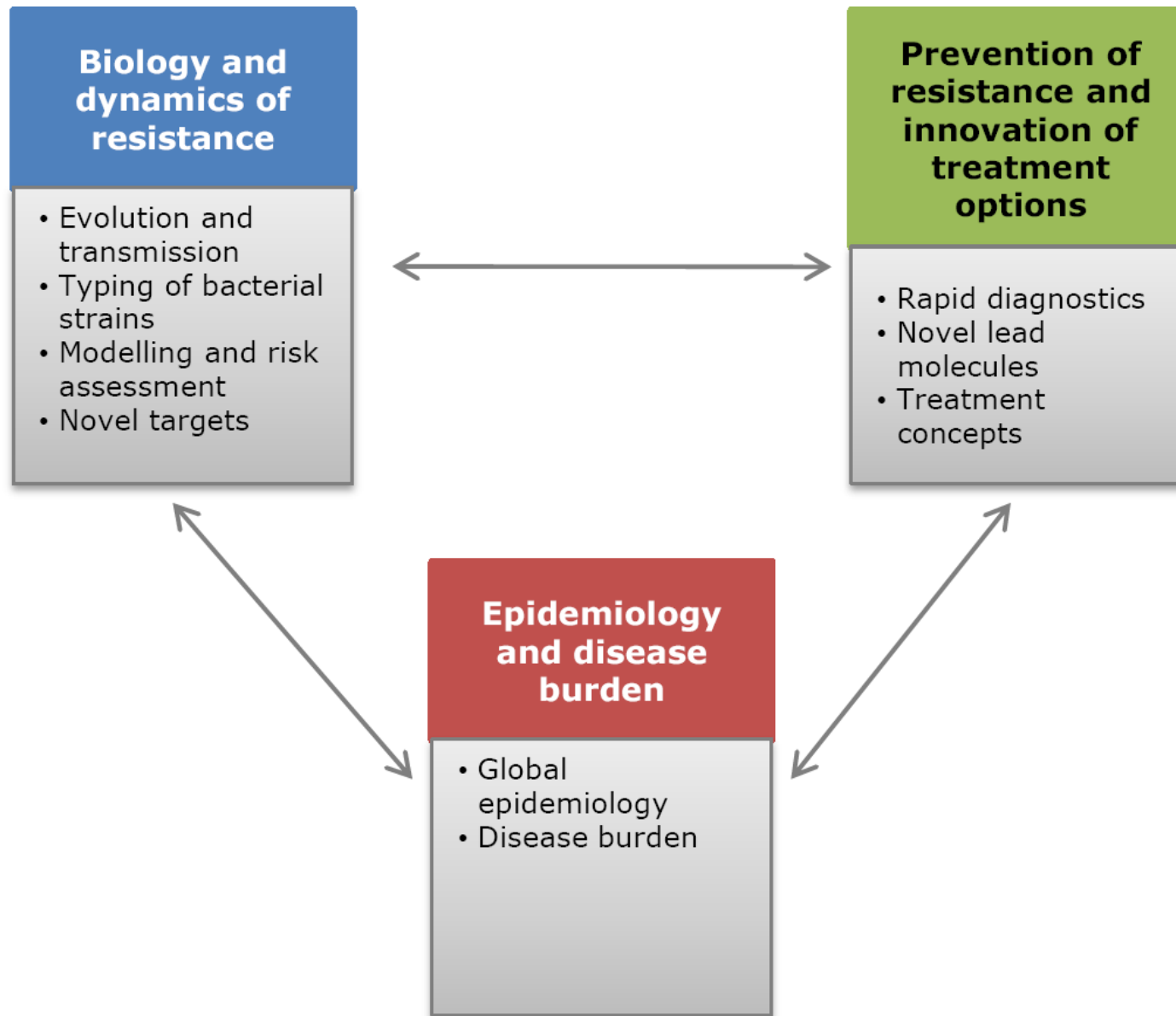
- Rapid diagnostics
- Novel lead molecules
- Treatment concepts



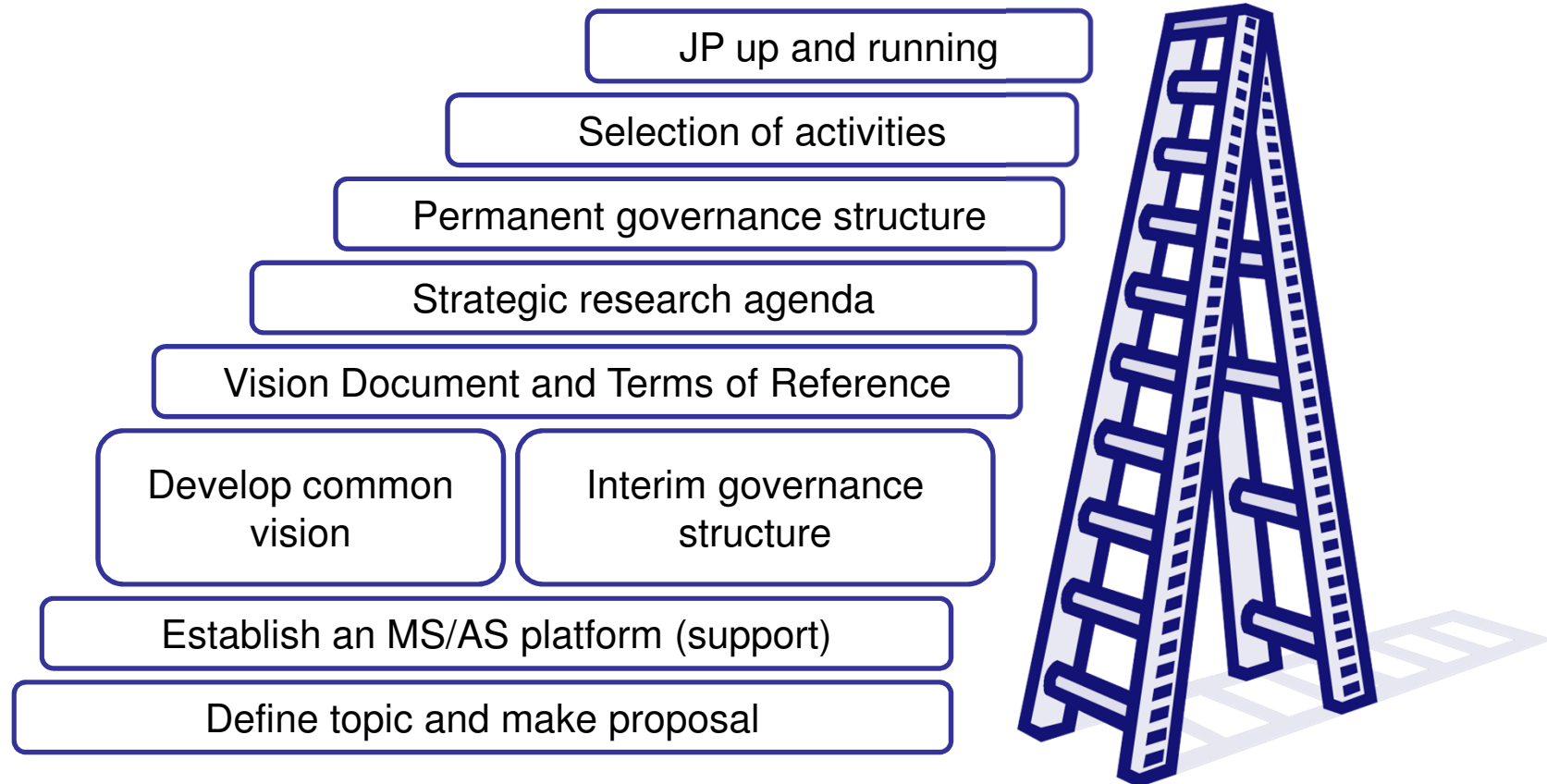
## **Epidemiology and disease burden**

*To increase knowledge of the global prevalence and spread of different infectious microorganisms, and to estimate the financial and societal burden of disease.*



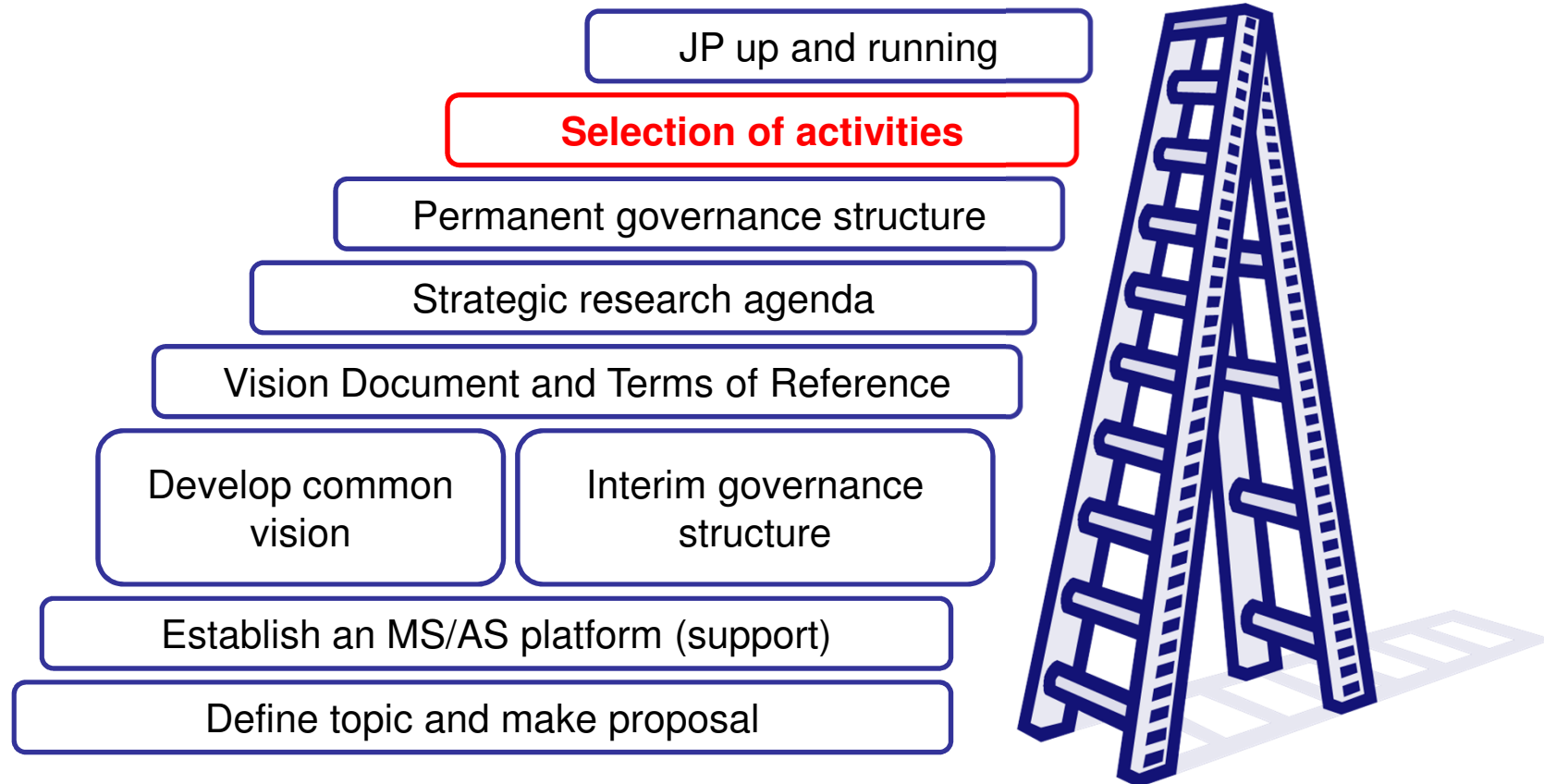


# Implementation of JPI AMR

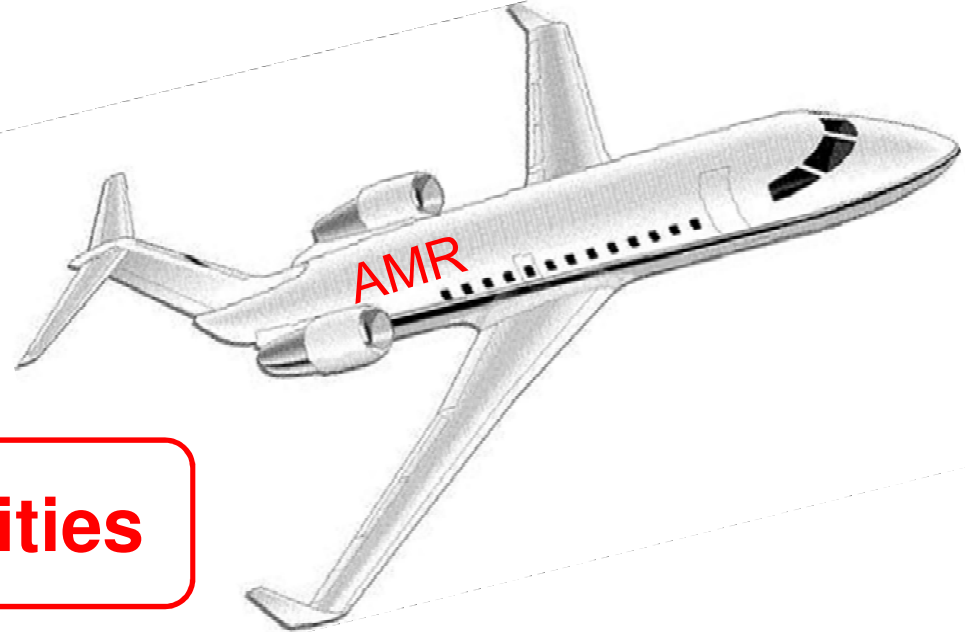




# Implementation of JPI AMR



# Joint Programming



**Selection of activities**

