Animal Identification and registration

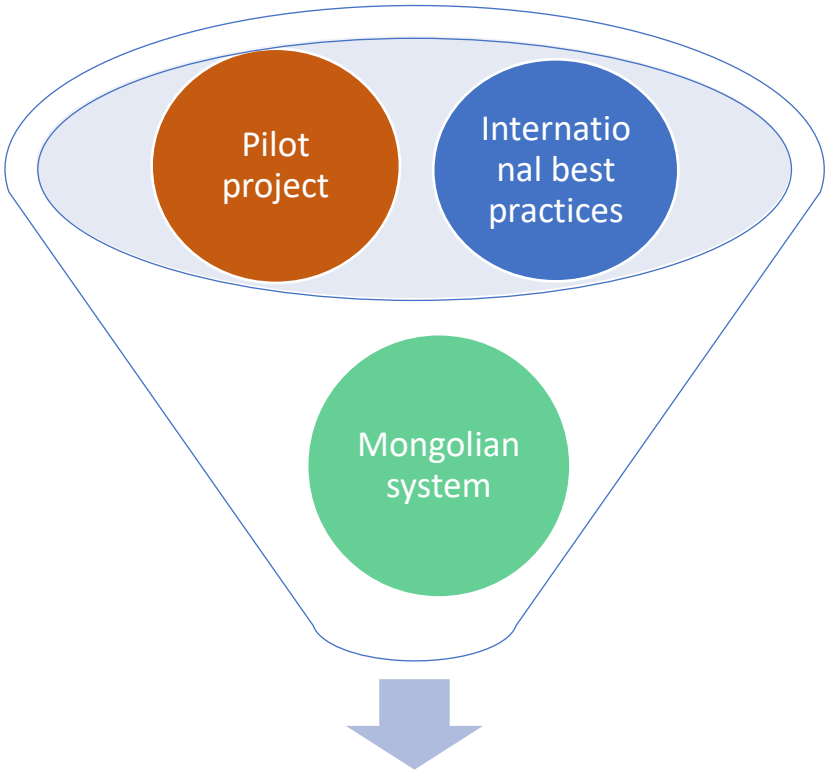
Recommendations

Erik Rehben

Senior consultant

Livestock identification, information and traceability systems

Recommendation origins



Approach

From the need analysis, recommendations for :

1. **Strategy to meet the needs**
2. **To implement the strategy**

Need analysis in Mongolia

- Animal breeding
- Pasture management
- Herd management
- Animal health
- Animal health certification
- Product labelling
- Fight against animal theft

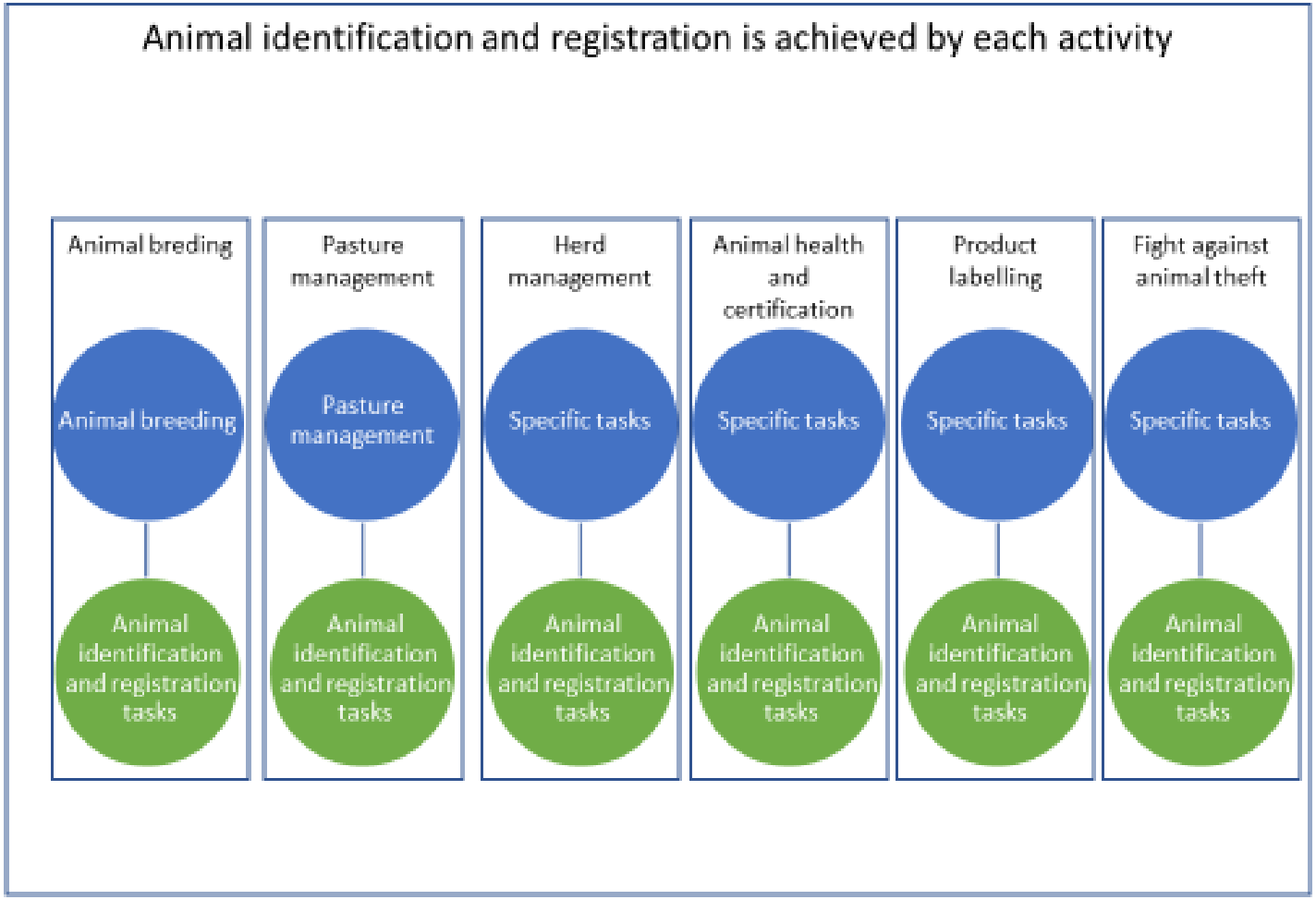
Recommendations about strategy to meet the needs

For axis:

1. **Goal**
2. **Sustainability**
3. **Outputs**
4. **Components**

Recommendations for the axis ‘goal’

To be avoided



Recommendations for the axis ‘goal’: a single shared multipurpose AIRS serving different activities

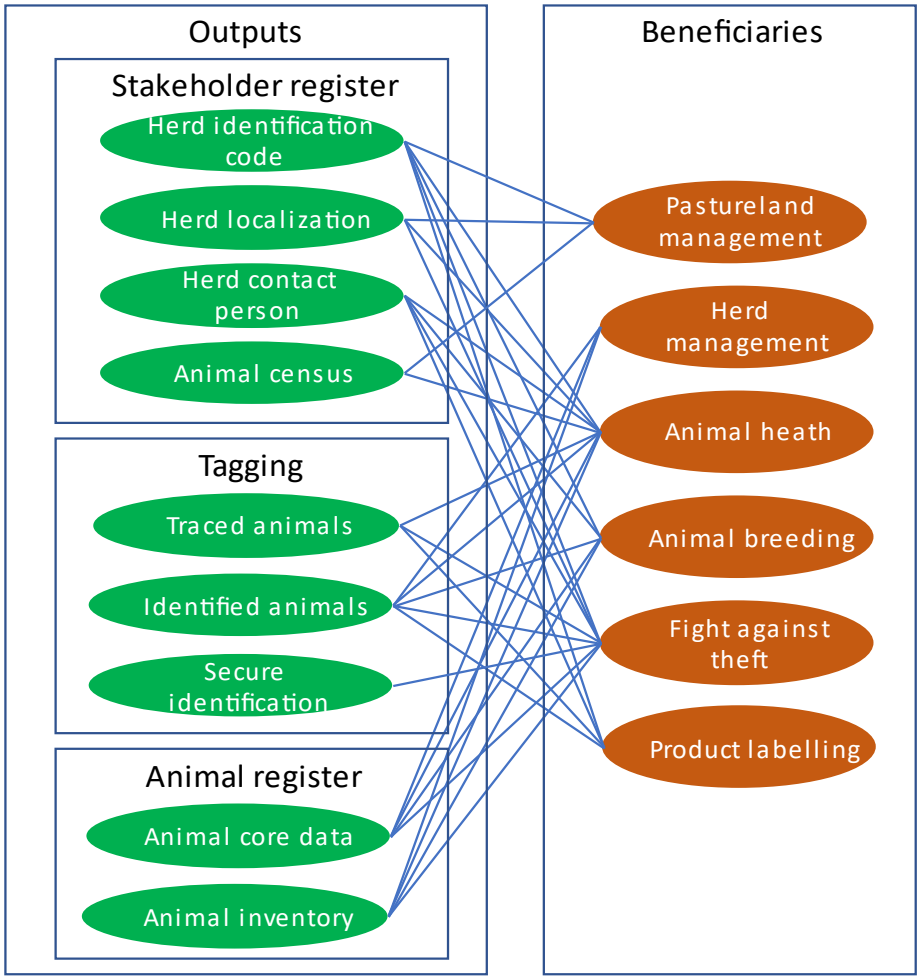
Recommendations for the axis ‘sustainability’

- **Cost and workload for all the stakeholders at the lowest possible level:**
  - Coordination of different field technicians
  - Herder implication
  - Appropriate methods: preprinted animal list, smartphones, readers…
  - Data collection limited to useful data
- **Direct benefits for the herders.**
- **Large scale data sharing with other activities: animal health, certification…**
- **Co funding herders + government based on the proportion of direct benefits for herder, no more than 10 % at the beginning.**

Recommendations for axis ‘Outputs’

For the six identified beneficiary activities, nine outputs distributed in three categories:

1. Stakeholder register.
2. Tagging.
3. Animal register.



Recommendations for the axis “components”

- **Component # 1: one national stakeholder register**
- **Component # 2: animal registers per herd**
- **Component # 3: tags and tagging**
  - Camelids and bovine: large tags with a 12 digits animal ID
  - Horses: microchips with a 15 digits animal ID
  - Small ruminants moved from a herder: tag with a 6 digits herder ID
  - Small ruminants for breeding purpose: small tags with a 12 digits animal ID.
- **Component # 4: simple versatile data collection methods close to the animals**
- **Component # 5: data sharing through a single data base**

Strategy implementation

The strategy would be implemented through :

1. **Organization**
2. **Workflows**
3. **Information system**
4. **Deployment plan**

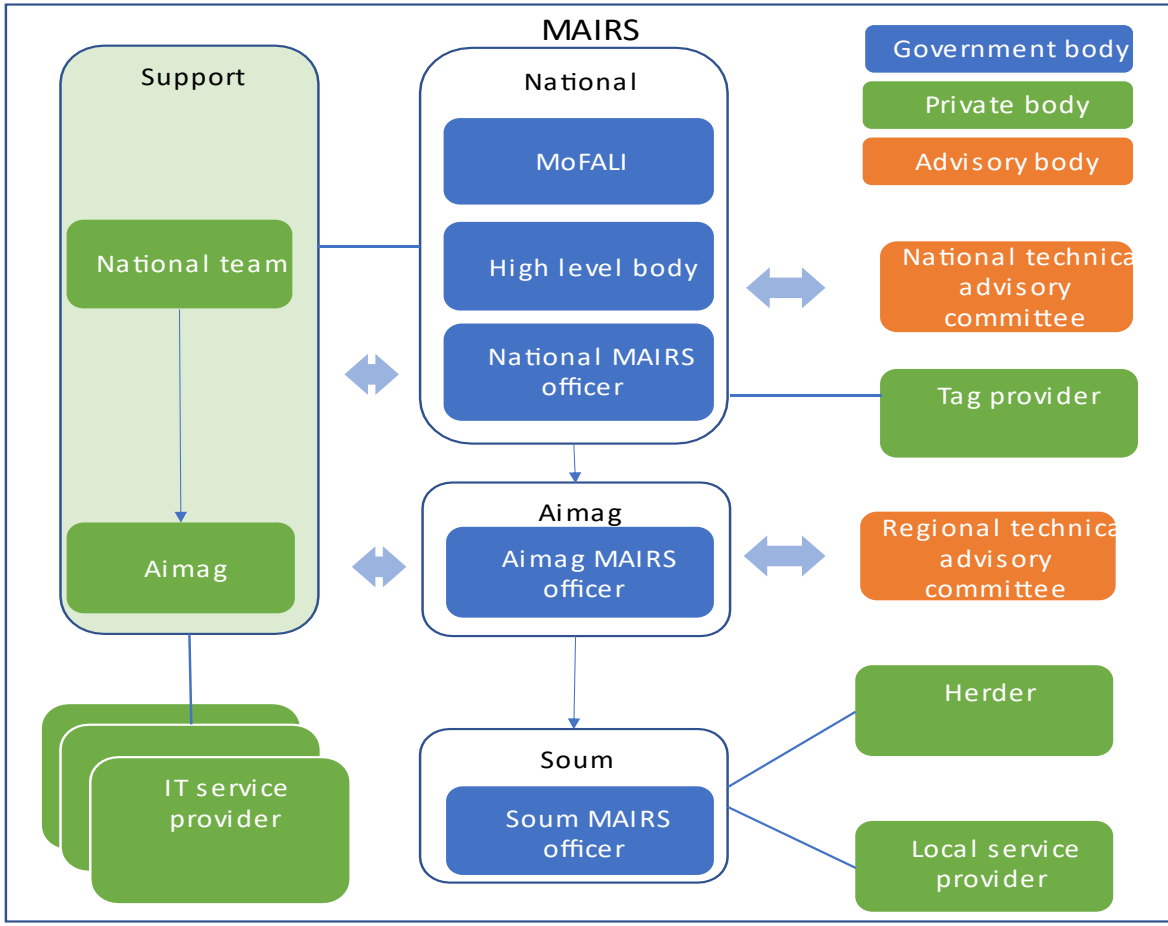
Recommendation for the organization

A skeleton (blue) based on **government AIRS officers** at **three levels national, aimag and soum**.

AIRS advisory committees (red) with representatives from stakeholders at **national and aimag level.**

A private public partnership (green):

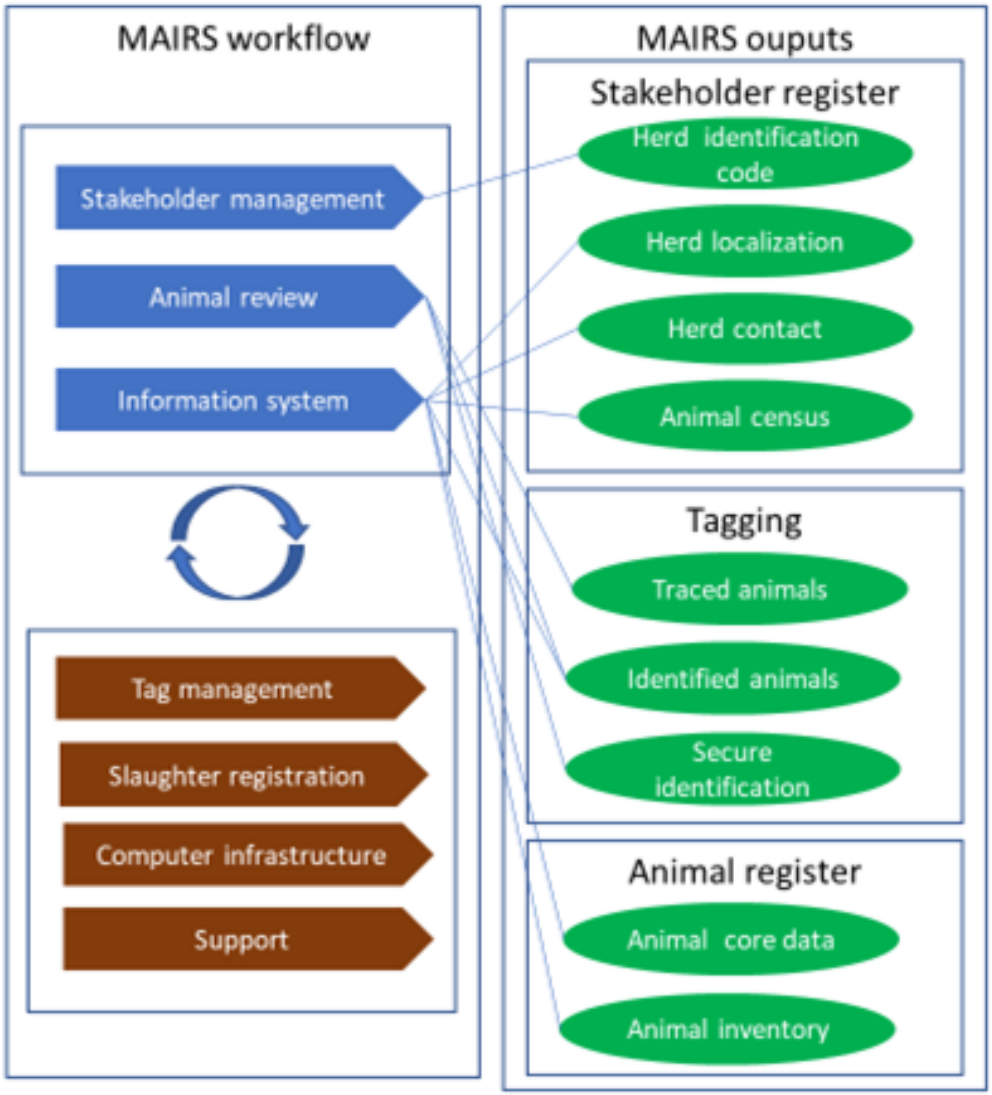
- National level:
  - IT service provider
  - Tag provider
  - Support team.
- Soum level :
  - service providers
  - herders



Recommendations for the workflows

Below workflows should be implemented:

1. Business processes (Blue).
   - Stakeholder management.
   - Animal review.
   - Data service.
2. Support processes (Red):
   - Tag management.
   - Slaughter registration.
   - IT infrastructure
   - Support.



Recommendation for the role of the information system

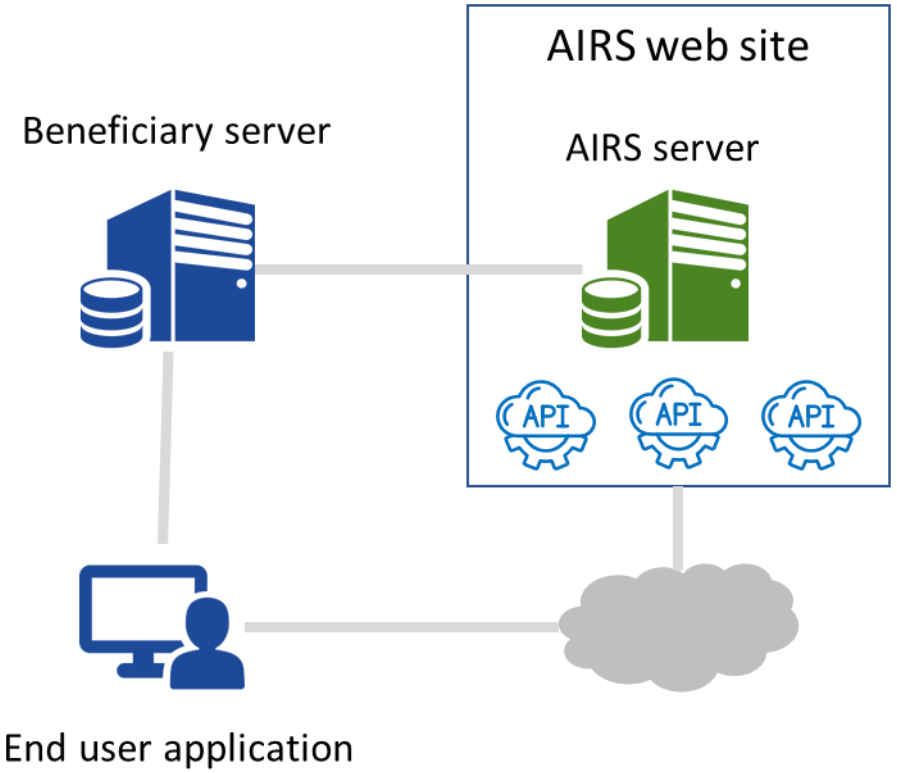
The information system

1. Should be a website providing **a wide range of user applications** through API with:
   - **Data** from the AIRS data base
   - **Data processing**: animal registration…

2. Should **support mass data exchanges** between servers, AIRS and the ones of the beneficiary activities: MAHIS, Breeding...

End user applications should :

- **Retrieve AIRS data** either from its server or though AIRS API.
- **Register AIRS data** through AIRS API.

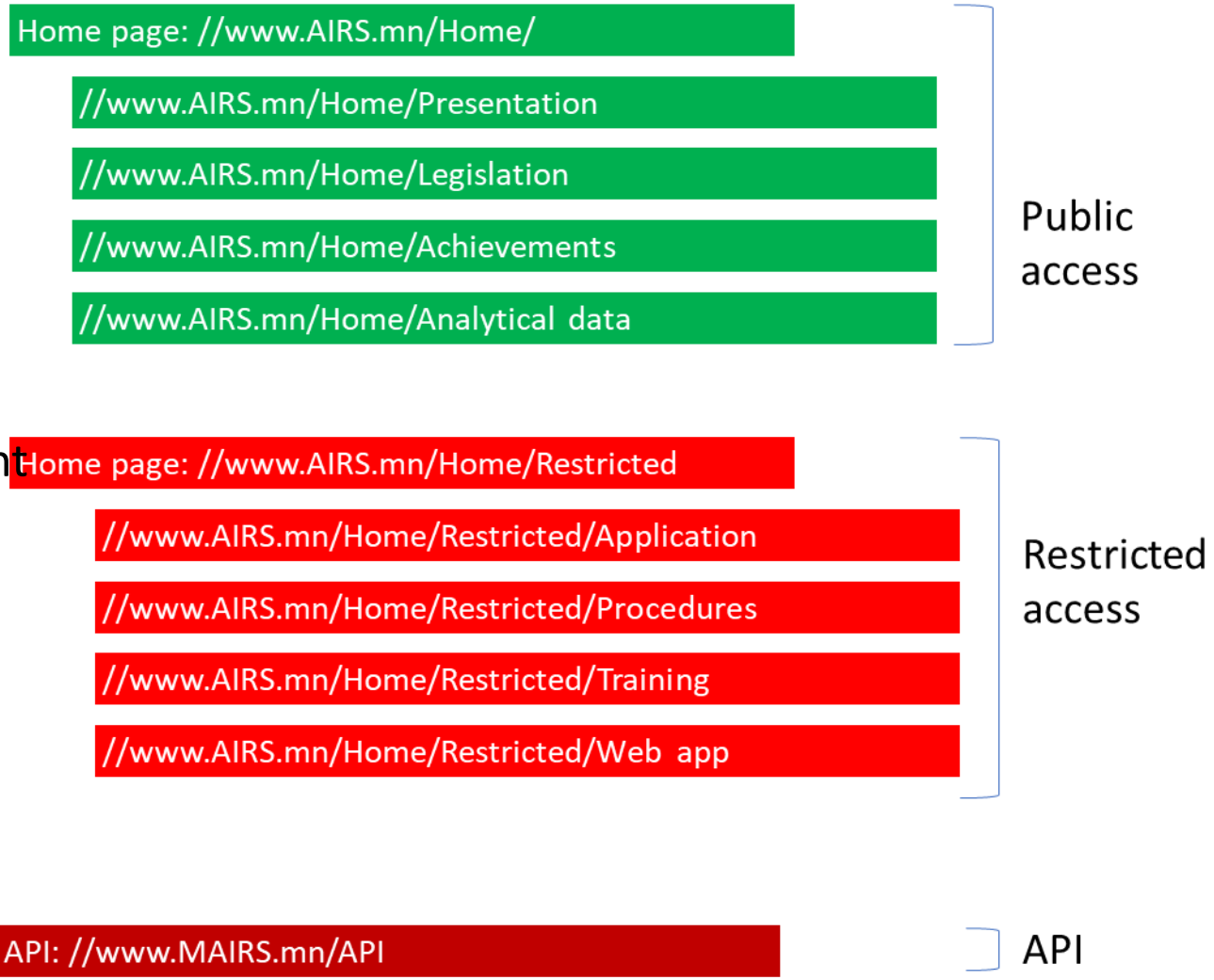


Recommendation for functional architecture of the website

A **root** (blue):
www.AIRS.mn

Three parts:

1. Public (green)
2. Restricted to users having an AIRS account (red).
3. API restricted to authentified applications (brown)



Recommendation for the technical architecture

The website should be used by beneficiary activity applications through different devices: servers, smartphone or PC.

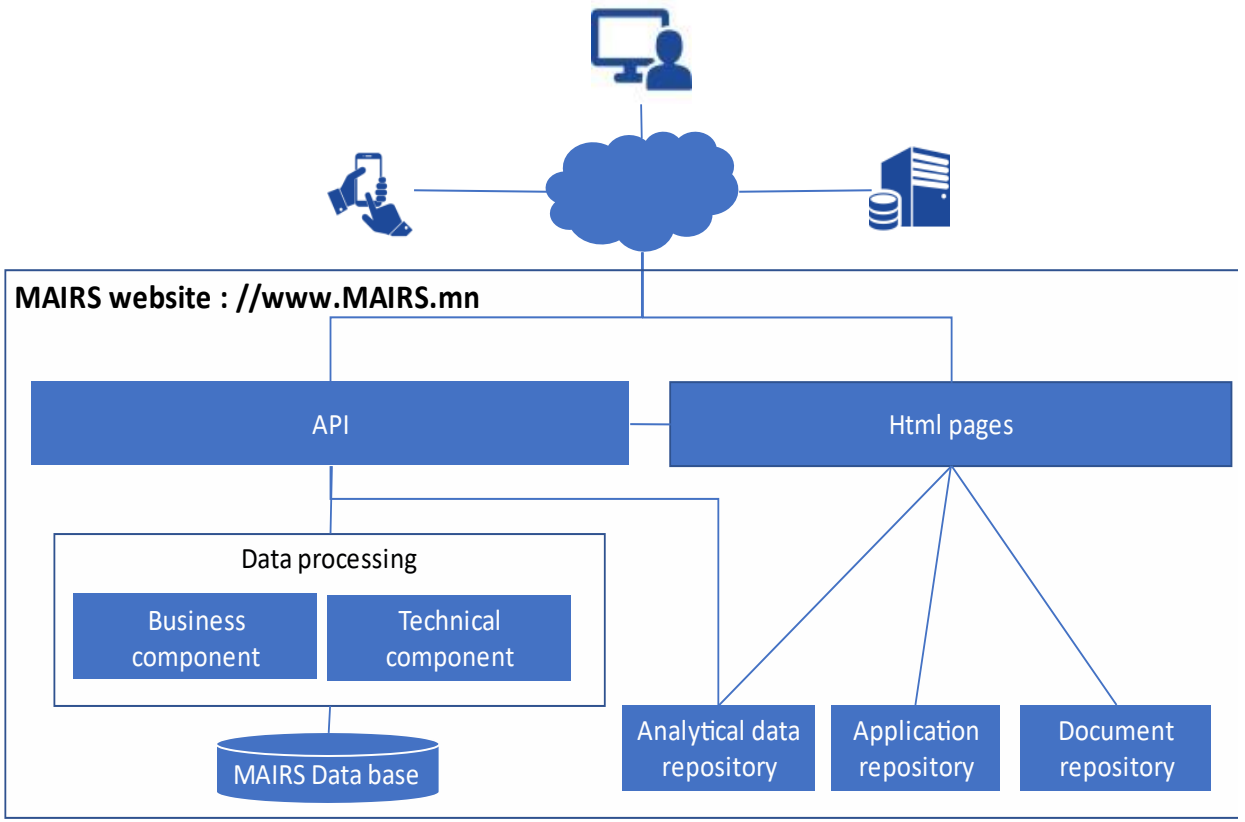
The website provides :

- API
- Html pages.

The html pages provide user browser with:

- Analytical data (Statistics, data to be analyzed…)
- Applications (mobile…)
- Document: procedures, communication , training

API provide user applications with business or technical components in relation with the data base.



Recommendation for a deployment plan

Three phases:

1. **Coordination with the AIRS beneficiary activities on the key steps.**

1. **One year focused on :**
   - Software development.
   - New standard operating procedures.
   - National deployment preparation.

2. **A national deployment, in 3 years, in 3 steps by group of aimags including for each steps:**
   - Awareness campaign for the stakeholders.
   - Training sessions for the actors.

Thank you for your attention