



**International Science & Business Belt
and
Heavy Ion Accelerator for RIB
KoRIA**

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Big Picture

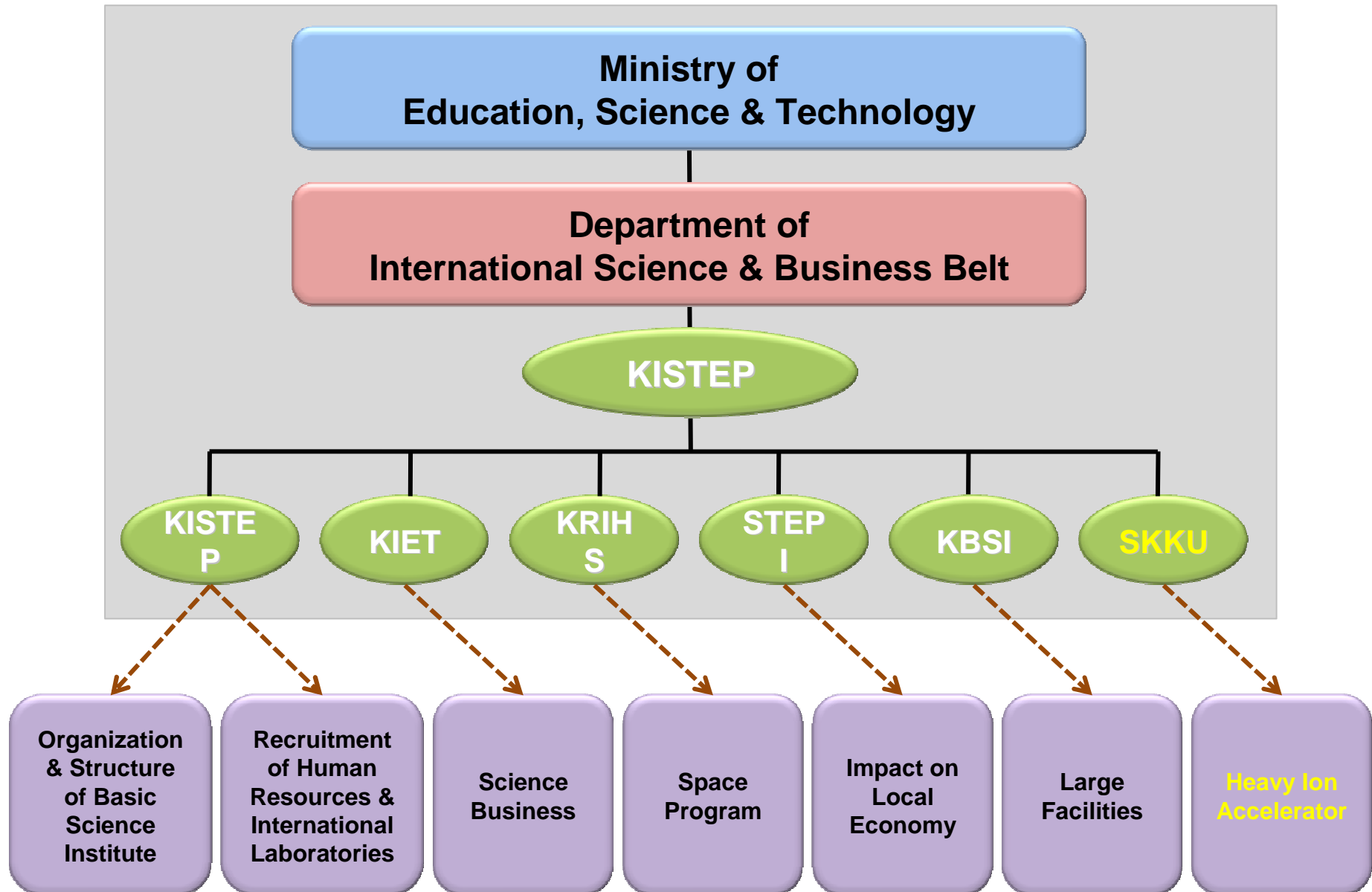
**International Science & Business Belt
(ISBB)**

Heavy Ion Accelerator KoRIA

Status

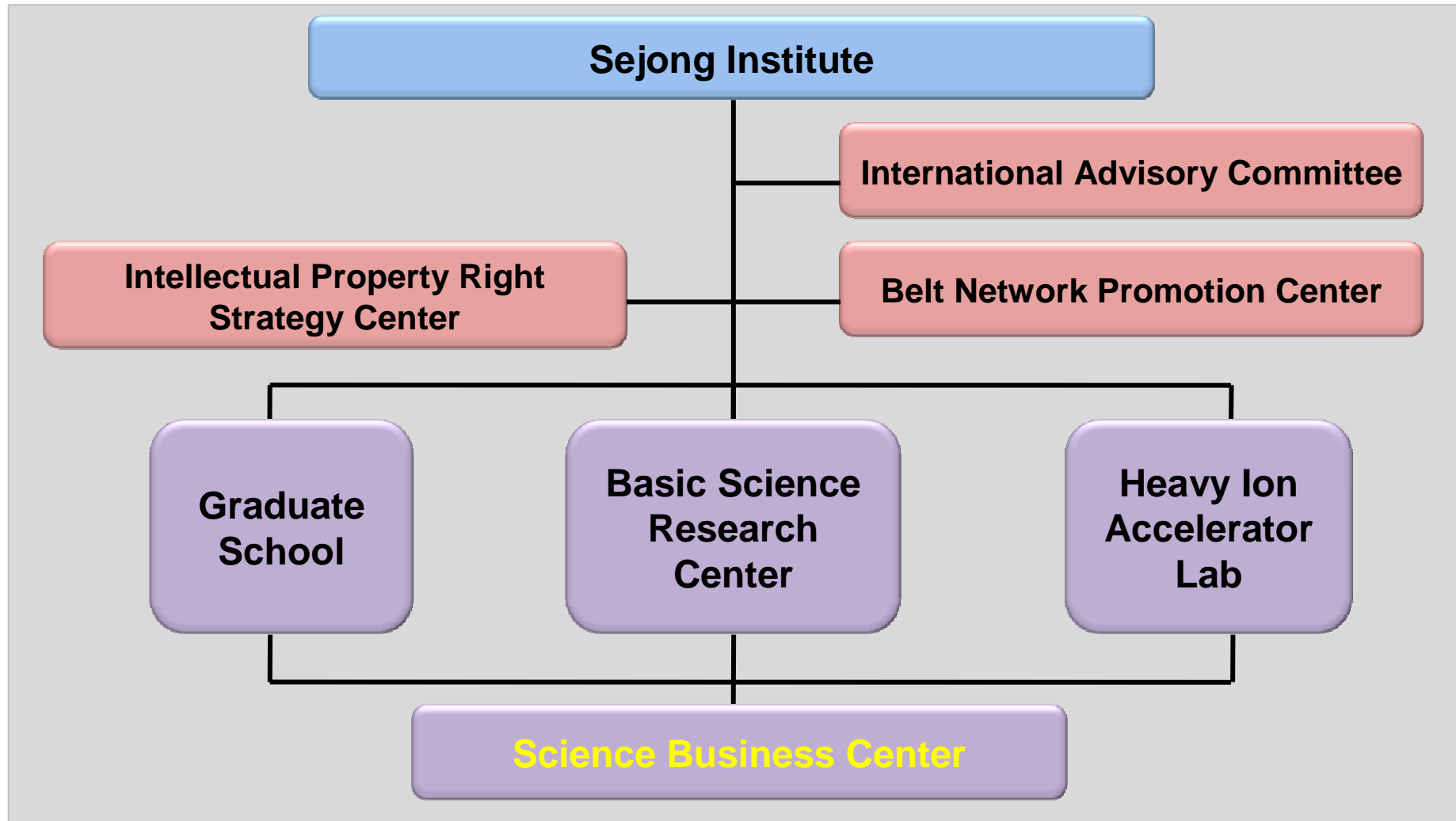
- Feb. 2008: Int'l Science & Business Belt (ISBB) Team was formed in the Ministry of Education, Science & Technology
- Jan. 2009: Basic Plan for ISBB was announced by National Council of Science and Technology with a total budget: ~ 3 B USD
- At present: Further planning is under way.
- A special law is submitted to the National Assembly.

Structure of Planning of ISBB



Sejong Institute

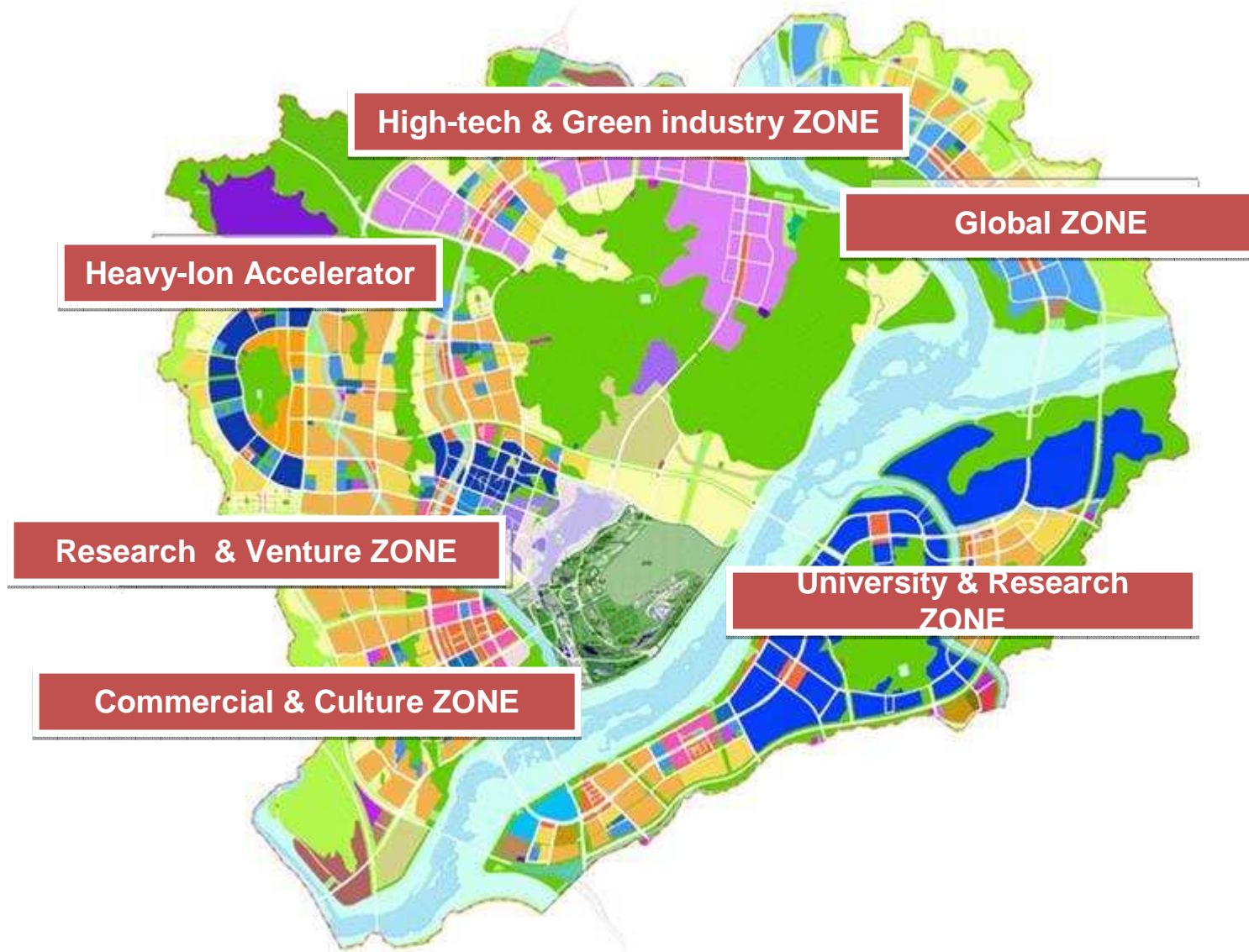
as announced Jan. 11, 2010



SeJong(世宗) City



Design of Sejong(世宗) City



Heavy Ion Accelerator 'KoRIA'

KoRIA

- Name of the facility
 - In Korea we call it "**Heavy Ion Accelerator**".
 - A **tentative** name that scientists use: "KoRIA".
(**K**orea **R**are **I**sotope **A**ccelerator).
 - The official name needs further discussions.
- Status
 - Will be the cornerstone core facility for "Basic Science Institute" to be established.
 - **Conceptual design work** started and will be finished by November, 2010.
- Proposed Budget : ~ 0.4 B USD
- Planning: 2009 ~ 2012
- Construction: 2012 ~ 2016

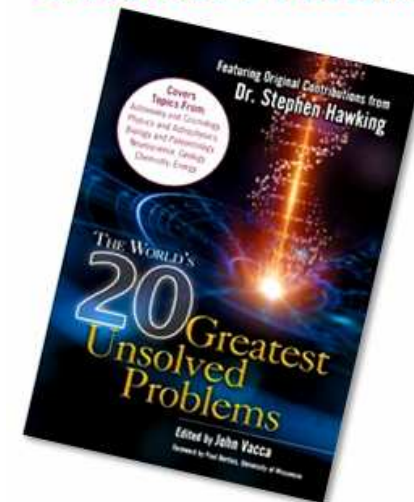
Basic Concepts of KoRIA

- **Multipurpose**
- **Both ISOL & In Flight Fragmentation**
for **production of rare isotope beams**
(In Flight Fragmentation after ISOL: more exotic beams)
- **Maximum use of (stable & RI) beams**
- **Pump and Probe**

Multipurpose Facility

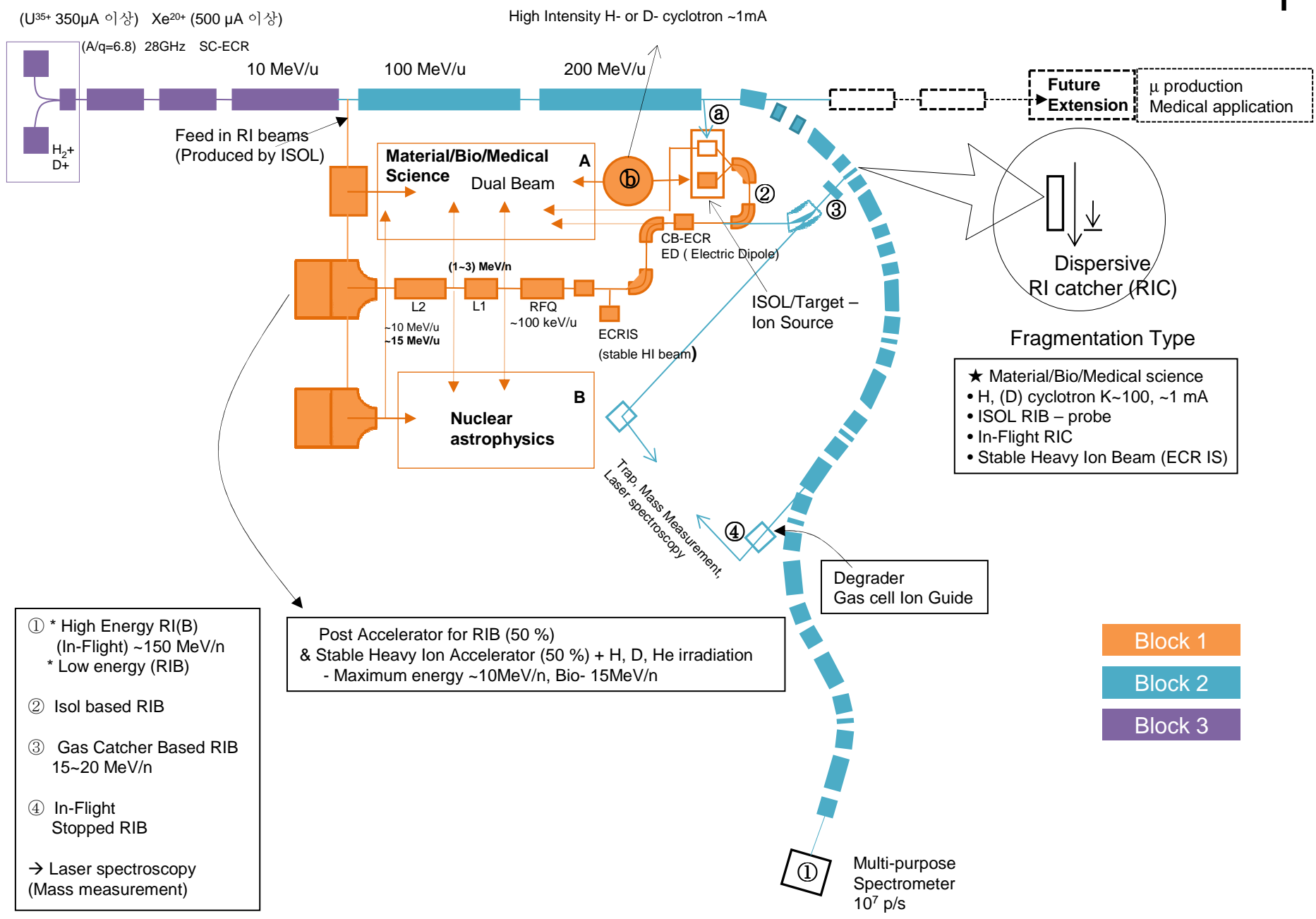
- Nuclear and Nuclear Astrophysics
- Material Science using stable HI & RIB
- Bio and Medical Sciences with HI & RIB
- Atomic Physics & Fundamental Symmetry
- Nuclear Data Production for Energy
- Nuclear Fusion (Plasma)

**The World's
20 Greatest
Unsolved Problems**



Both ISOL & In Flight Fragmentation for producing rare isotope beams

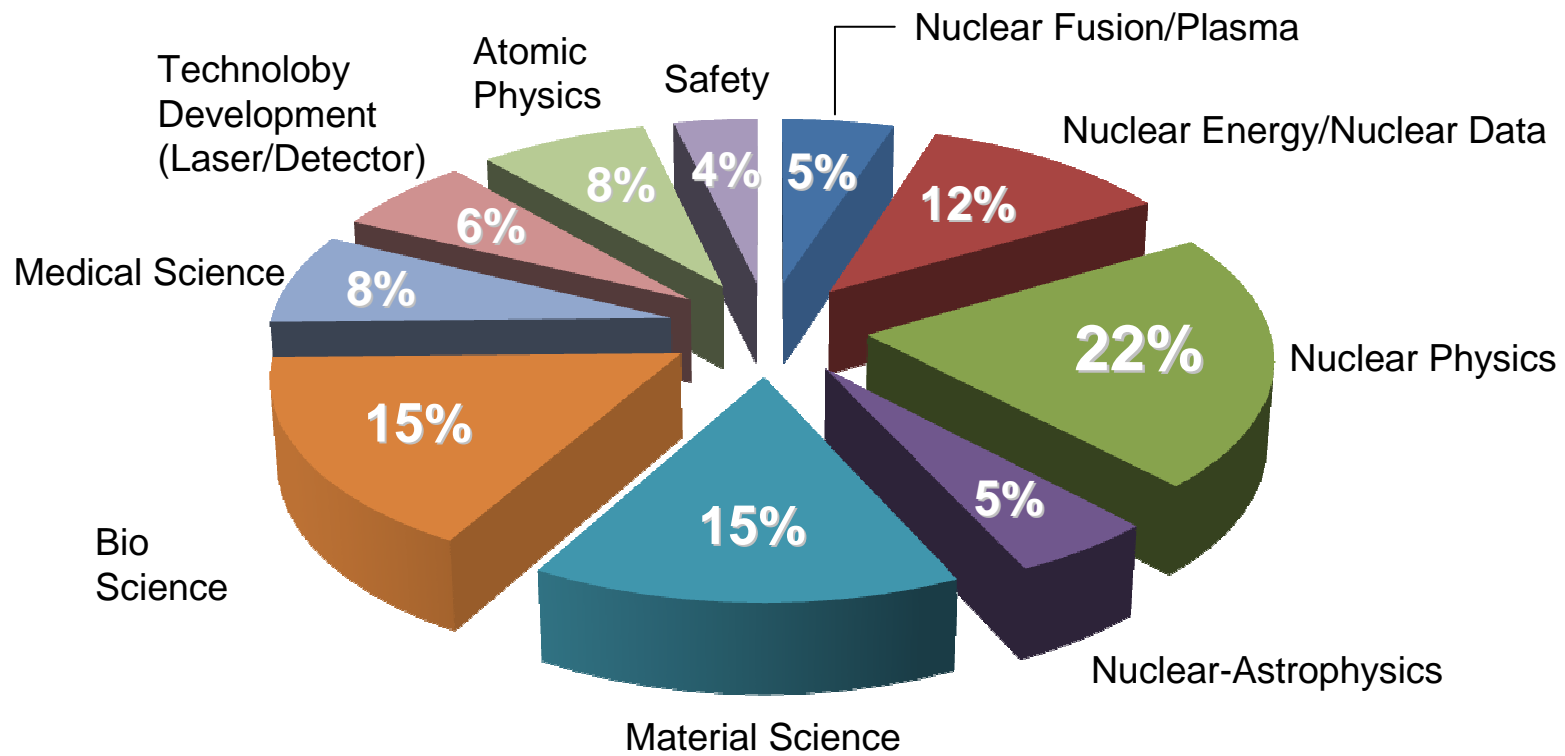
- Isotope Separator On Line (ISOL)
- In Flight Fragmentation
- In Flight Fragmentation after ISOL: to produce more exotic beams, if possible.



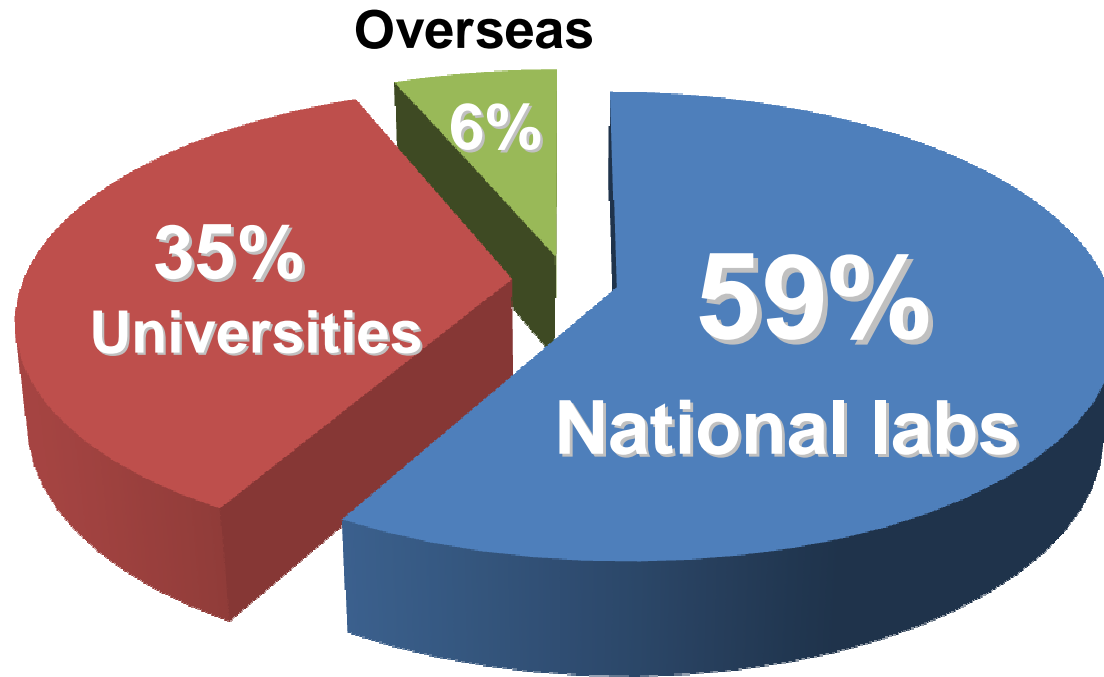
Letters of Intent

- Call for letter of intent only in Korea at this moment
- During one month in May 20 ~June 20, 2009
- 83 Lol's are received.

Areas of interests



Who submitted Lol?



Summary

- We want this facility to be designed as an international users' facility from the initial stage.
- International collaboration is very important.
- We are open for international collaboration and discussions to improve the very preliminary conceptual schematic diagram.
- R&D studies on the "instrumentation" is part of the conceptual design work.
- Letters of Intent from international users will be called for soon.
- A Workshop will be held in Korea in Oct 1~2, 2010 as the 2nd ANPhA (Asian Nuclear Physics Association) Symposium.

A vast field of stars, likely a star cluster or galaxy core, with the text "Thank you." overlaid in the center. The stars are densely packed and vary in color, including yellow, orange, red, white, and blue. The background is a deep black, making the individual points of light stand out sharply.

Thank you.