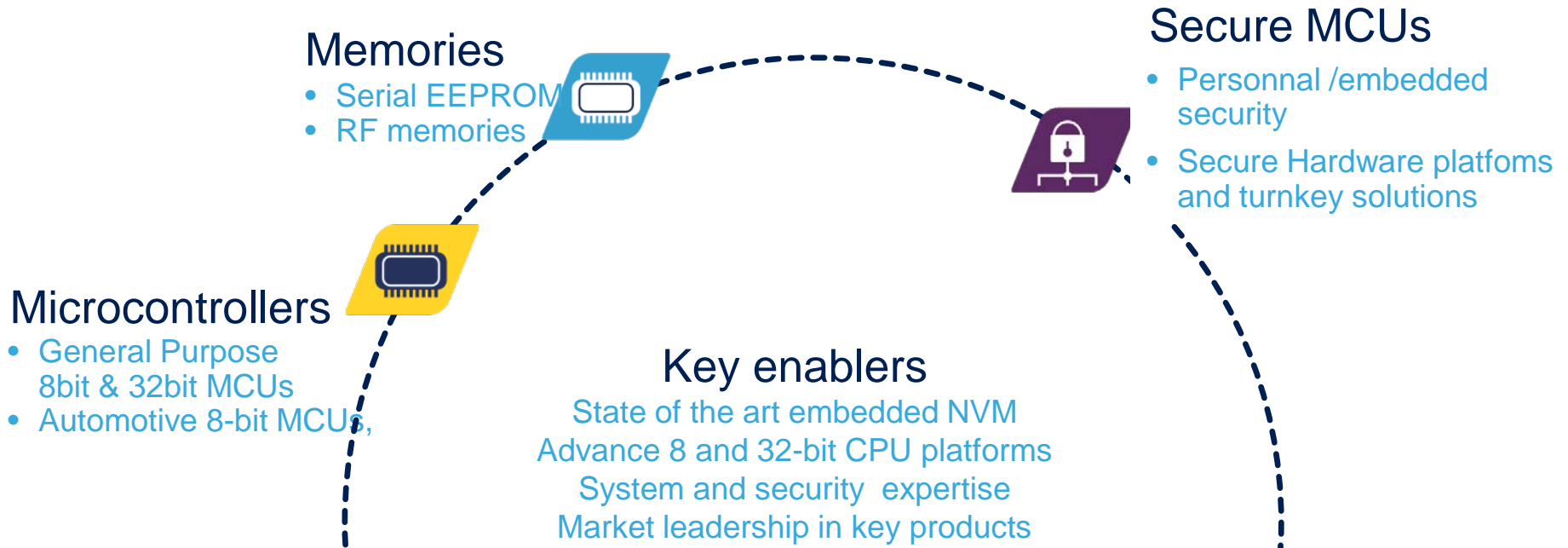# MDG-MMS group
Stage proposals on e-NVM

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MDG-MMS Group

Memories
- Serial EEPROM
- RF memories

Secure MCUs
- Personnal /embedded security
- Secure Hardware platfoms and turnkey solutions

Microcontrollers
- General Purpose 8bit & 32bit MCUs
- Automotive 8-bit MCUs,

Key enablers
State of the art embedded NVM
Advance 8 and 32-bit CPU platforms
System and security expertise
Market leadership in key products

Supporting ST target markets

Automotive   Healthcare   Industrial/Smartgrid   Security   Consumer

Secure MCUs Perimeter

Market

Personal Security		Embedded Security
Banking	Pay TV	Mobile NFC / SIM & M2M
Identity	Transport	Computer Consumer Security

Enablers

eNVM Technology

Advanced security

Contactless performance

Software & Turn-key solutions

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GP and Secure Micro e-NVM Demand

- Performances
  - High reading speed (10ns – 30ns of access time)
  - Low consumption for ULP of RF applications (Stand-By, Reading, Modify)
  - Cycling capability above 500Kc at hot temperature (105°C)
  - More than 15 years of retention

- Low cost process and design
  - Reduced periphery area
  - High density bit cell for Code Storage purposes
  - Optimized analog design
  - Easy integration of Memory Process module

Stage Proposals

- 1. Study and implementation of static and dynamic I/R Drop simulation flow for complex NVM IPs in advanced technology nodes.

- 2. Montecarlo simulation on e-NVM Read-path for high accuracy analysis and access time characterization.

- 3. Ultra low power and low area analog design of e-NVM building blocks in FDSOI technologies.

Maximum number of selected Interns will be 2