



Challenges/ Issues Related to Implementation of Building Projects

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AGENDA

- **Concerns in conventional construction practice**
- **Alternative technologies**
- **Challenges and Issues**
- **Discussions**



Concrete mixer without a hopper



Concrete : Manual mixing by labour



Controlled Concrete: Coarse Aggregate directly dumped in to Mixer drum by baskets



Gaps in shuttering



Gaps in shuttering and weak centering



Reinforcement provided not to line and without proper cover



Column casting out of plumb



Honeycombs in column



Honeycombs in a column



Gunny bag embedded into column & beam junction



**Severe honeycombs and Reinforcement exposed in
roof level beam**



Severe honeycombs and reinforcement exposed



Honeycombs in landing slab

Boys hostel B/5/C3-C/5/C2



Honeycombs in roof level beam

Construction Industry is Booming

- **Second largest contributor to the national GDP**
- **4.73 Cr human resources engaged**
- **100% FDI cleared**
- **Development agenda by all political parties**
- **7-8% projected growth due to increased demand**

Construction Industry has Concerns Too

- Traditional methods are still largely followed
- Slow adoption of technology advancements
- Projects are not delivered on time
- Project Cost overruns
- Quality issues
- Material costs are shooting up
- Low margin industry
- Low skill levels of resources
- Activists see a major threat to environment
- The Paris Declaration 2015 committed to low carbon infrastructure projects

How to Improve

- Adoption of advanced Construction practices
 - Pre cast Construction with dry wall panel walls
 - Rapid Construction
 - Factory made ready to fit homes with modular design
 - 3- D printed homes
- Sustainable construction practices
 - Viable substitution for Aggregates
 - Waste minimisation
 - Usage of recycled aggregates
 - Ready Mix Concrete
- Manpower with green skills
- Third party Quality Control
- Adoption of IT tools such as BIM, Project Management



Pre Cast Construction

- **Factory controlled quality**
- **Significant time savings**
- **Detailed planning done upfront**

Precast Construction

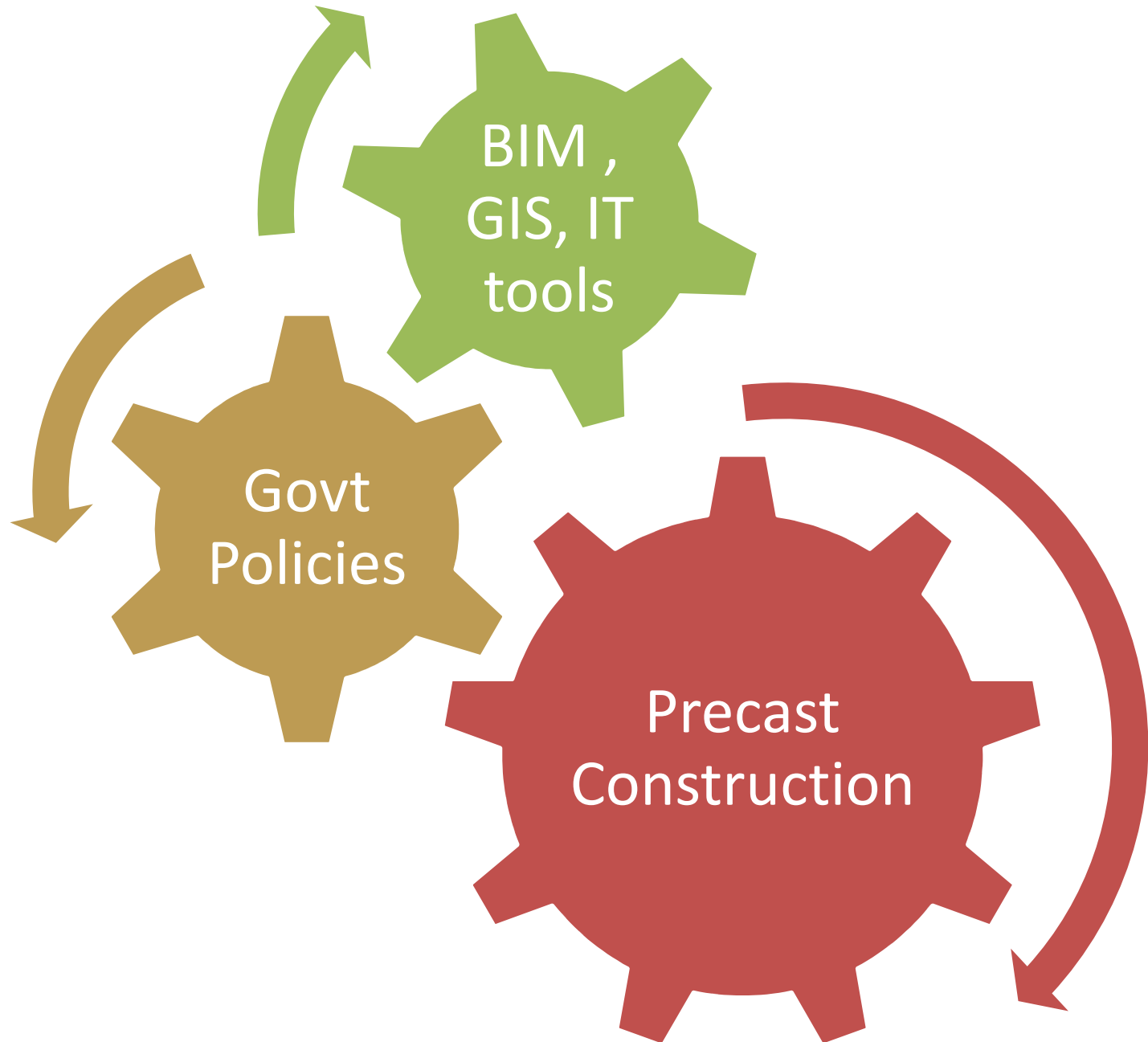
Brighter side

- Factory controlled quality
- Reworking costs are less
- Significant time savings
- Upfront detailed planning
- Environment friendly

Shader side

- Initial higher costs
- Logistical issues related to transportation
- Needs large open places, higher capacity cranes for erection
- Improper fixing of water utilities could result in dampness

Way Forward



Thank You