Web of Things
Linked Data & Semantic Processing

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Scope

- Work on use cases and requirements for the Web of Things
- Specify cross-domain WoT vocabulary
- Extend the work on WoT TD with semantic concepts and demonstrate benefits thereof
- Collaborate and expand semantic WoT community

Use Cases and Requirements

- Identify areas of work of the Task Force and provide use cases and requirements for each area
- Use cases and requirements should be constrained to those that use semantics and Linked Data in WoT
- Review the role of semantics in use cases from existing IoT/WoT activities (e.g., W3C WoT, OCF oneM2M etc.)
- Align the work and publish it in:
  - Joint White Paper on Semantic Interoperability for the Web of Things

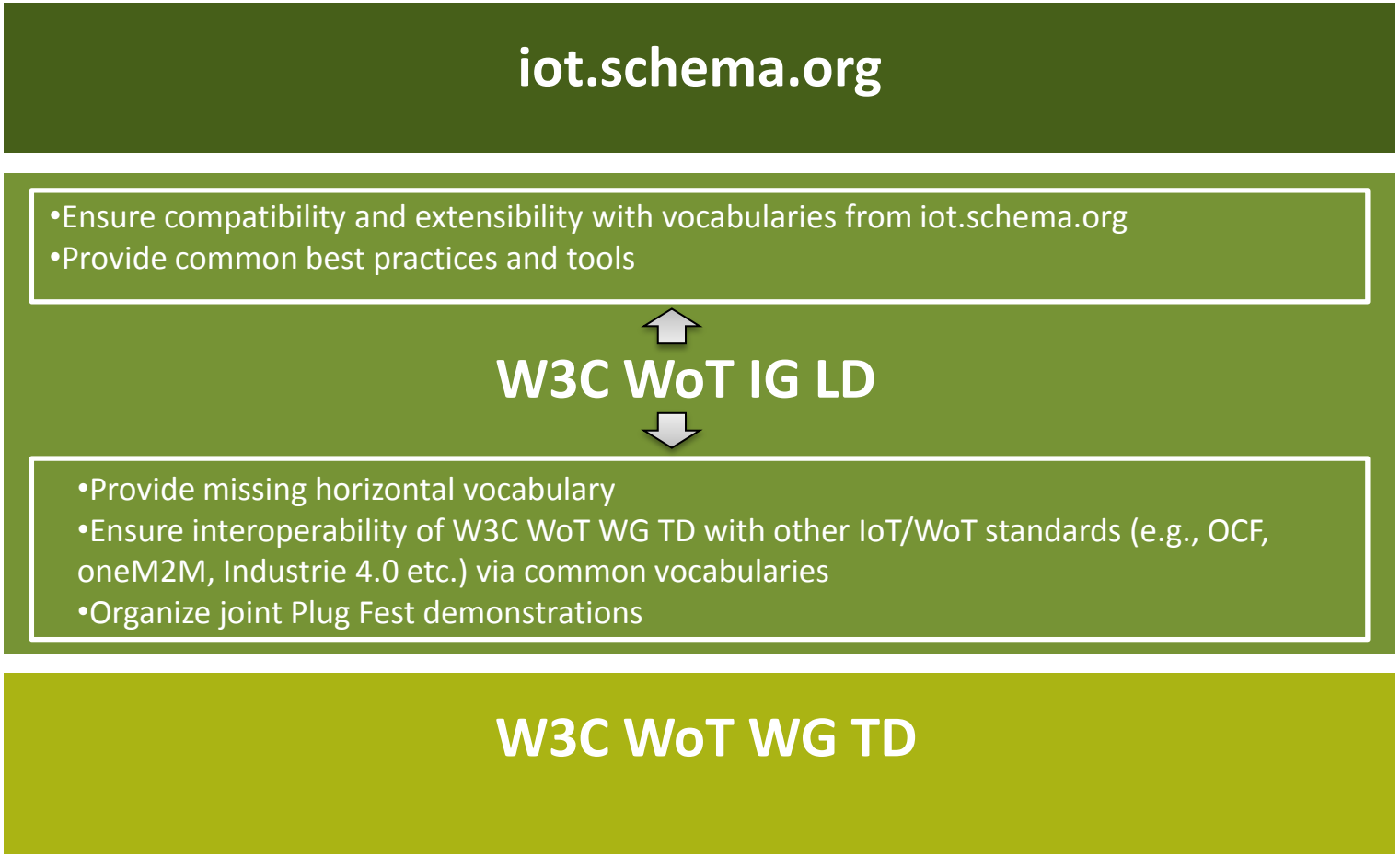
Cross-Domain Vocabularies

- State of the art of available cross-domain vocabularies
  - E.g., http://lov.okfn.org/dataset/lov/
- Consolidate and extend the work on the WoT ontology
  - E.g., https://github.com/w3c/wot/blob/master/thing-description/w3c-wot-td-ontology.owl , http://iot.linkeddata.es/def/wot/index-en.html
  - Extend the ontology to enable TD validation based on reasoning
- Specify cross-domain vocabulary for WoT
  - E.g., common horizontal terms found in TDs and APIs elsewhere, platform- and application-related metadata, NFPs, units etc.
  - Ensure interoperability with domain models from other standardization activities, e.g., oneIoTa: http://oneiota.org/documents?filter%5Bmedia_type%5D=application%2Framl%2Byaml
  - Ensure compatibility and extensibility with vocabularies from iot.schema.org
- Provide easy-to-use tooling for vocabularies
  - E.g., schema.org generator: http://polak.es/en/generator.html, JSON-LD editor: https://editld.com/

Extended Semantic Concepts for W3C WoT TD

- Extend the work on WoT TD with semantic concepts in areas:
  - Semantic search/discovery
  - Validation/inference/semantic or integrity constraints
  - Service composition/recipes/application templates
- Leverage semantic-based approach of W3C WoT and demonstrate benefits of the semantics
- Tooling
  - E.g., TD Playground http://plugfest.thingweb.io:8081/

Tight Collaboration with W3C WoT and iot.schema.org



Collaborations with other SDOs and groups is planned too.