JavaScript Standard Library aka Built-in Modules

for stage 2

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Agenda

- Proposal Status
- Responses to June 2019 Advancement Objections
  - Adding ability to import from scripts
  - Unified Namespace
- Advance to Stage 2

Current Status

Current Proposal:
https://github.com/tc39/proposal-javascript-standard-library

Request to add import from Scripts

- This proposal builds upon the currently specified module semantics.
  - We didn’t want to add any new surface area.
  - Imports are currently not allowed in Scripts.
  - Importing from scripts is orthogonal to JS Standard Libraries.
  - Champions have no desire to expand this proposal to importing from scripts as it opens up a whole new set of issues.
  - Believe that importing from scripts should be a separate proposal.
  - Have no desire to tie this proposal to a Import from Script proposal.

Unified Standard Namespace

- Was an objection to move forward unless there was one unified namespace for browsers.
  - There will likely be several namespaces. (Hopefully not too many.)
  - Standards bodies will likely want their functionality in a dedicated namespace, e.g. TC-39, TC-53, W3C, …
  - Other namespaces will likely have multiple stakeholders, e.g web components agreed upon by both W3C and Node Foundation

Two Namespace Classes

Standard Managed	Vendor / adhoc Managed
Governed by one or more stakeholders	Informal or localized governance
Openly communicated governance	Private / adhoc governance
Identifiers widely communicated and reserved in central repository	Identifiers chosen from unused but preferably reserved in central repository
Name correspond to functional areas	Name based on vendor criteria
Modules are standardized	Module inclusion based on adhoc criteria
Included modules for wide adoption	Included module at vendors discretion
Intended for large development community	For vendor or product specific developers

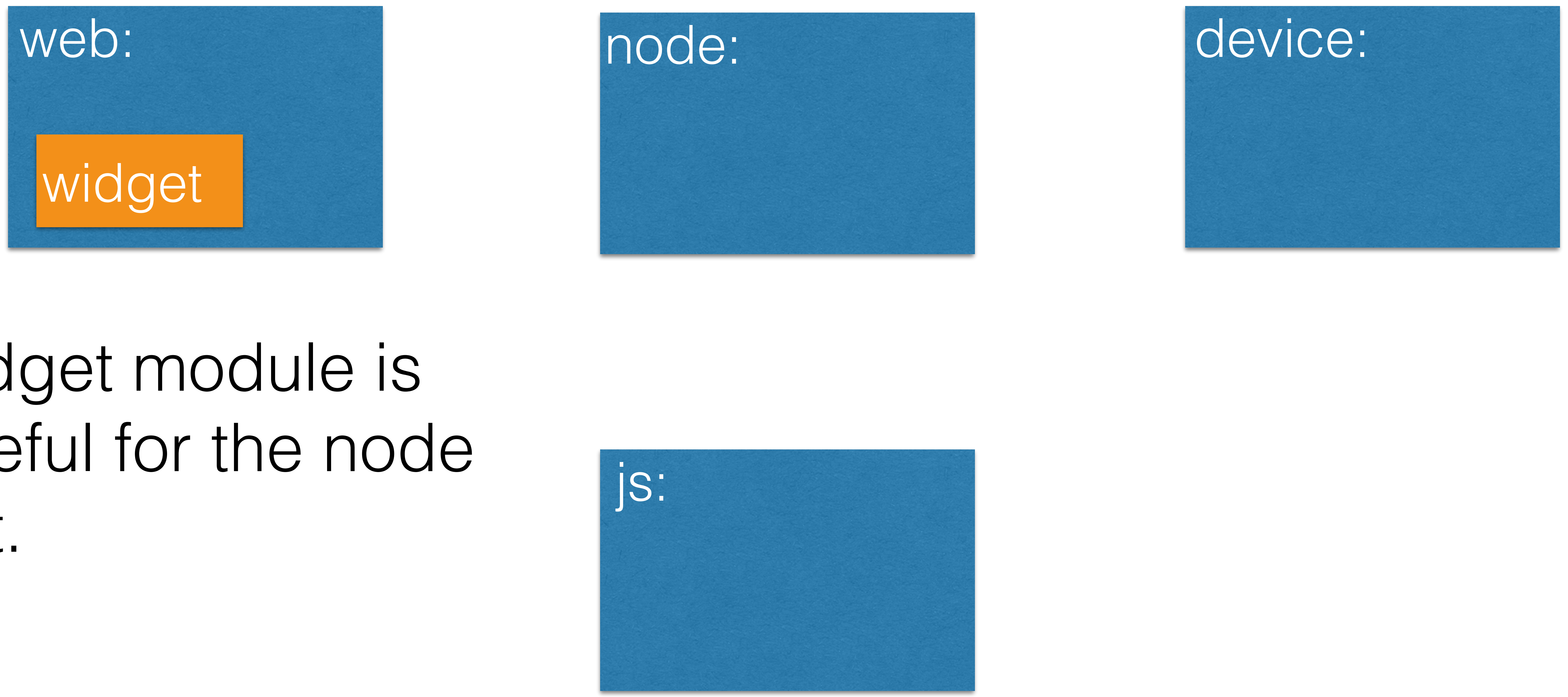
What About Modules in Multiple Namespaces

- There are two likely scenarios.

  1. Module useful in another namespace.
     e.g. node adopting a web module.

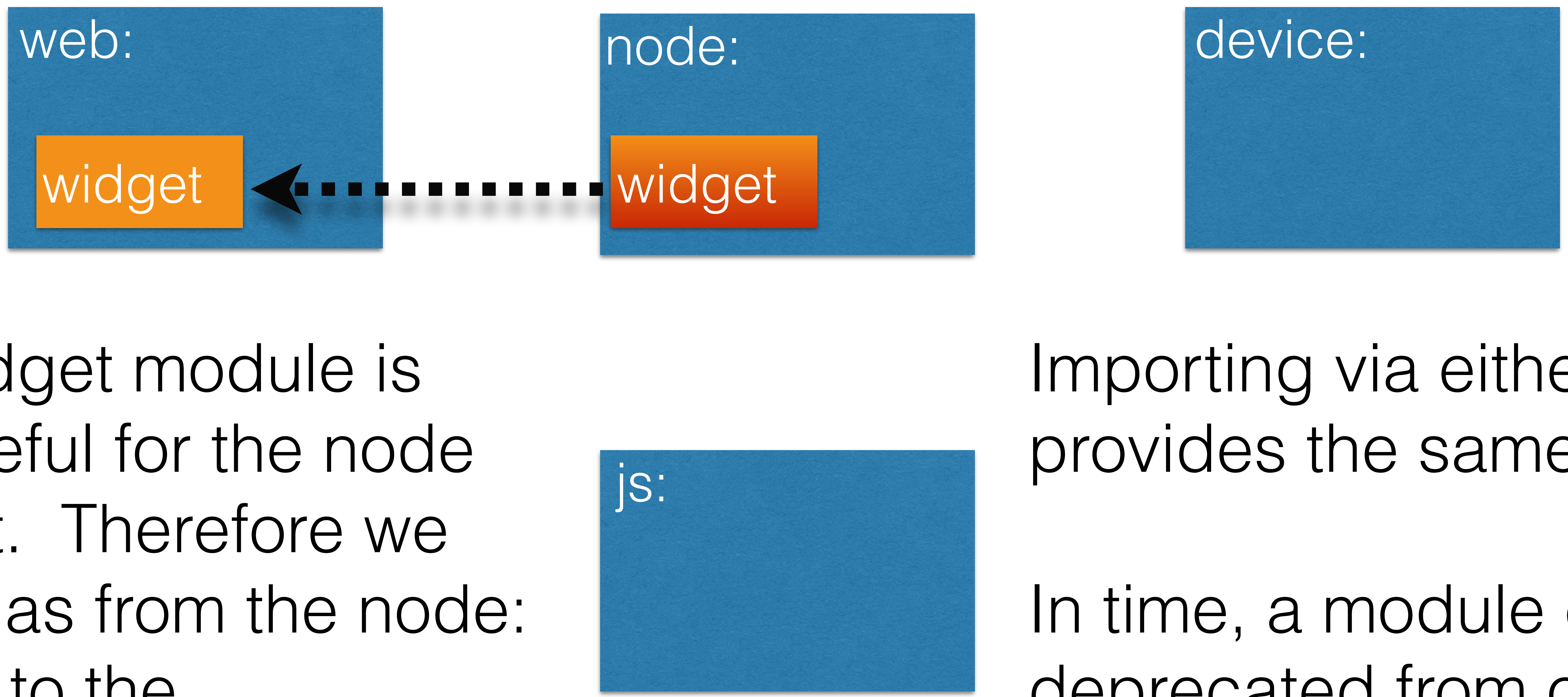
  2. Modules with the same name exists / proposed in two different namespaces. They have different functionality.

Module useful in another namespace



The web:widget module is consider useful for the node environment.

Module useful in another namespace



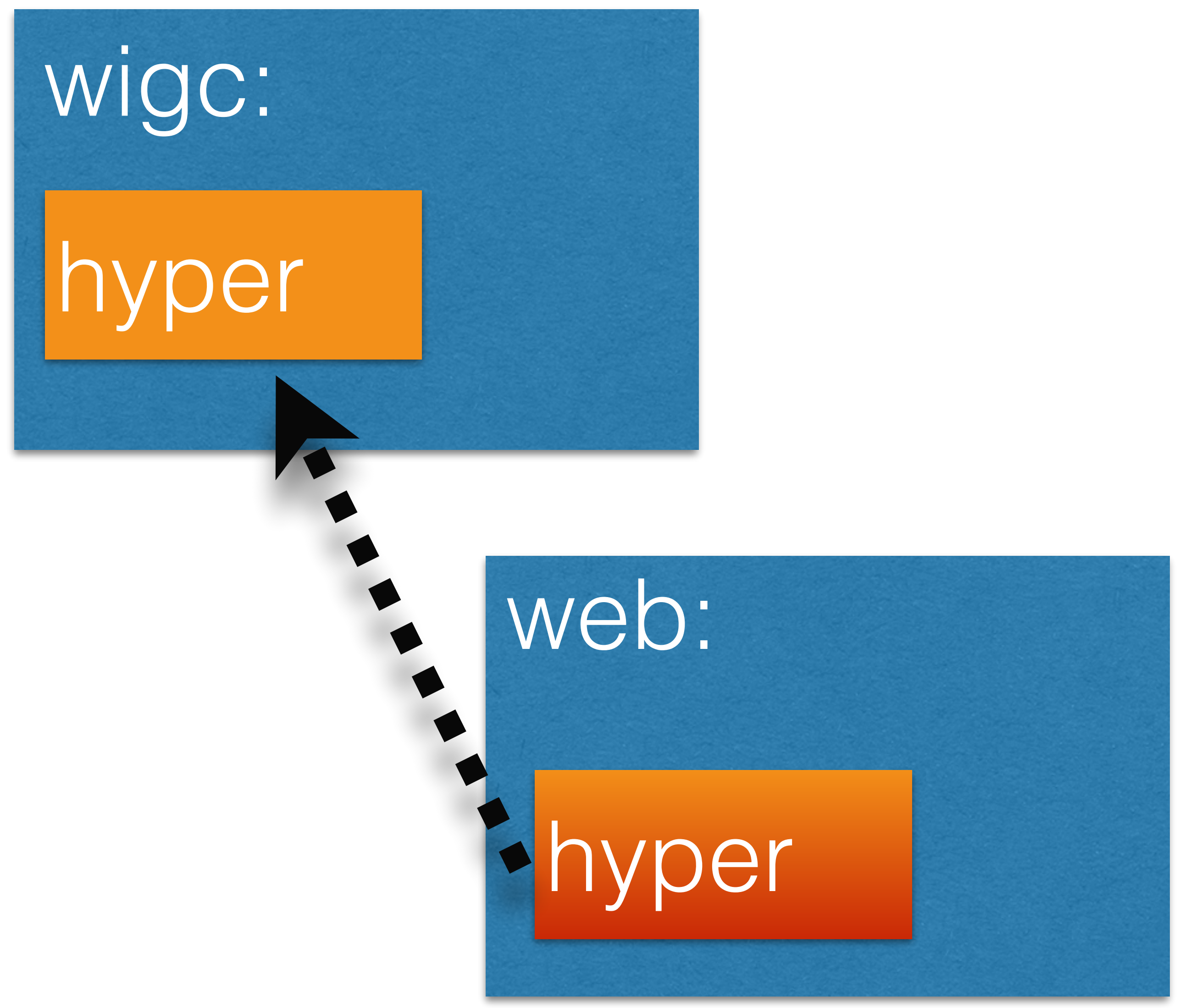
The web:widget module is consider useful for the node environment. Therefore we create an alias from the node: namespace to the web:widget module.

Importing via either namespace provides the same module.

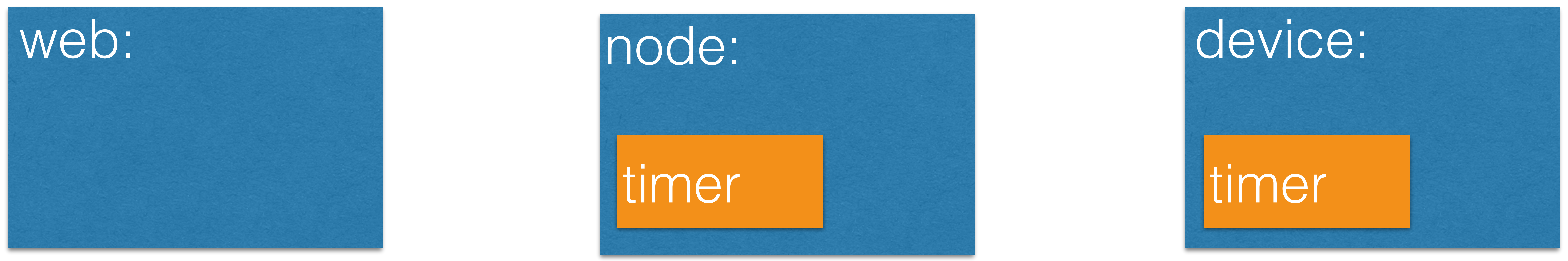
In time, a module could be deprecated from one namespace to effect a “move”.

Module useful in another namespace

- Consider a wigc: namespace where modules can incubate. When such a module is ratified by W3C, for example, an alias could be created from web:hyper to wigc:hyper.



Module name collisions



There exists a node:timer module as well as a device:timer module

They can easily exist in two distinct namespace.
Any desire to alias would require reconciliation of differences.

Our Namespace Proposal

- TC-39 is responsible for the content of the **js:** namespace (core language).
  - Outside parties are free to propose additions to the **js:** namespace.
  - TC-39 uses stage process to approve modules for the **js:** namespace
- We, TC-39, set up a repository for additional namespaces and share that repository with other stakeholders
  - We initially reserve specific namespaces, then open them up to other interested parties
  - The initial reserved set would include names like **web:**, **node**:, **device:**, etc

Other Host Namespaces

- Hosts are free to use their own namespace (non-reserved) and include modules they choose.

Questions?

Stage 2?

Thank you!