Programming Team Roadmap

Note: This roadmap is flexible and evolving. If a feature is absent from this roadmap it doesn't necessarily mean we aren't interested, it could just mean that no one has mentioned it yet or that no one has volunteered to do it. Projected time frames will also change as people step up/down to/from projects.
How to add: Right click on a table row and choose Insert row (above or below, doesn't matter) to add a new item to the roadmap.

Short Term:

Project	Status	Notes	Firmness	Who's working on it
Add policies/procedures/guidelines	In progress ˅	https://github.com/Hubs-Foundation/policies-procedures-guidelines-public/issues/1	Very Firm ˅	Imaginer
Remove Mozilla branding	In progress ˅		Very Firm ˅	Many people
Convert Community Edition deployment to use Node instead of Bash	Launched ˅		Very Firm ˅	Imaginer, HrithikWins
Improved setup and/or instructions for Hubs Compose	Launched ˅		Very Firm ˅	
Add any missing dependency/node version information to repository documentation	Not started ˅		Firm ˅	
Repository assessments	Not started ˅		Firm ˅	
Issue/PR tracker cleanup	Not started ˅		Firm ˅	
A solution for kit (architecture, rock, sound) hosting so that they can be used with Spoke again	Not started ˅		Firm ˅	
A solution for crater.glb so that it can be used with Spoke again	Not started ˅		Firm ˅	
Improve the Community Edition gen-hcce and gen-ssl scripts to take hcce.yaml into account and not require fiddling with it to make the SSL certificates work. Alternatively, make certificate provisioning	Not started ˅	https://github.com/Hubs-Foundation/hubs-cloud/issues/377	Firm ˅	

Project	Status	Notes	Firmness	Who's working on it
entirely automatic.				
Add an "update" Node script to Community Edition to pull the latest updates for the configured Docker images	Not started ▾	Some parts of the configuration will need to be updated to specifically include an image pull policy. See: https://github.com/Hubs-Foundation/hubs-cloud/issues/378	Firm ▾	
Untangle the services in Community Edition in the hubs-cloud repository	Not started ▾	- The services need to be checked against the state of their respective repositories for the latest commit before May 31 2024 for any bug fixes/improvements that may have been added to them and not to the repositories. Any fixes/improvements found then need to be added to the repositories. - Services that don't have a respective repository need to be transferred to their own repository. - Finally, the local copies of the services need to be removed and instead the services should be drawn from their respective repositories either via being automatically cloned in a script or being embedded as a submodule (or some other method yet to be determined).	Very Firm ▾	Imaginer, embedded_iot
Community Edition stability improvements	In progress ▾		Very Firm ▾	Doug Reeder, Imaginer

Mid Term:

Project	Status	Notes	Firmness	Who's working on it
Finish the new loader transition	Not started ▾		Very Firm ▾	
integrate hubs client add-ons api and	Not started ▾		Very Firm ▾	

Project	Status	Notes	Firmness	Who's working on it
add-ons (including behavior graphs and portals)				
Asset sharing between instances	Not started ▾		Not Firm ▾	
Combine BG Blender add-on with main Blender add-on as an experimental option	Not started ▾		Firm ▾	
Discord bot development restarted	Not started ▾		Firm ▾	
Easier addition of Hubs elements to Blender scenes via integration with Blender's Add menu and/or asset browser,	Not started ▾		Firm ▾	
Add a "Find objects by component" function to the Blender add-on	Not started ▾		Firm ▾	
Architecture/Rock/Sound kit automatic integration with Spoke or improved documentation on hosting them	Not started ▾		Firm ▾	
Fix scene loading timeout preventing scenes from loading on slow internet connections	Not started ▾		Not Firm ▾	
Fix text messages freezing VR	Not started ▾		Not Firm ▾	
Fix cursor vanishing when standing over in-room objects	Not started ▾		Not Firm ▾	
Fix camera tool	Not started ▾		Not Firm ▾	
Attribution support for the Blender add-on	Not started ▾	See also the "Use the KHR_xmp_json_ld glTF extension for attribution in Hubs" project	Not Firm ▾	
Use the KHR_xmp_json_ld glTF extension for attribution in Hubs	Not started ▾		Not Firm ▾	
Improved publishing management for the Blender add-on	Not started ▾		Not Firm ▾	
The option to exclude scene components from export for the Blender add-on	Not started ▾		Firm ▾	
Make disconnects from the room	Not started ▾	Fixes several bugs including one that	Not Firm ▾	

Project	Status	Notes	Firmness	Who's working on it
completely disconnect you from the room		allows kicked people to still hear audio from the room		
Improved asset import on the backend	Not started ⌄		Not Firm ⌄	
Update Tenor support to use the new api	Not started ⌄		Not Firm ⌄	
Maintenance updates	Not started ⌄	E.g. pgbouncer, the OS version for the docker images, dependency updates, threejs updates, etc.	Not Firm ⌄	
Assess and update wikis and allow user contributions to them	Not started ⌄		Firm ⌄	
Setup smoke instances for testing	Not started ⌄		Not Firm ⌄	

Long Term:

Project	Status	Notes	Firmness	Who's working on it
Polish/stabilize Hubs	Not started ⌄		Firm ⌄	
Allow youtube/vimeo links to play in-room	Not started ⌄		Not Firm ⌄	
Submit a combined Blender add-on as an extension on Blender's new extension platform	Not started ⌄		Firm ⌄	
Migrate hubs codebase to latest Node version	In progress ⌄		Firm ⌄	Matt Hargett
Screen sharing resolution fixed	Not started ⌄		Not Firm ⌄	
Make Hubs easily usable by educational institutions	Not started ⌄		Not Firm ⌄	
Continued Community Edition improvements	Not started ⌄		Firm ⌄	
Spoke development restarted	Not started ⌄		Firm ⌄	

Project	Status	Notes	Firmness	Who's working on it
Add support for spoke behavior Graphs on latest version of spoke	Not started ▾		Not Firm ▾	
Improved tests and expanded test coverage	Not started ▾		Not Firm ▾	
Improved and easier to find testing files	Not started ▾		Firm ▾	
Improved VR support	Not started ▾		Not Firm ▾	
Improved mobile support	Not started ▾		Not Firm ▾	
Improved crash handling	Not started ▾		Not Firm ▾	
Integration with icosa (Google Poly successor with API compatibility)	Not started ▾		Firm ▾	
Collaborate between Hubs, Icosa, and OMI for developing glTF extensions for more advanced content.	Not started ▾		Not Firm ▾	
GDPR compliance	Not started ▾		Not Firm ▾	
Improved notifications when there are issues (e.g. mic blocked by browser)	Not started ▾		Not Firm ▾	
Generic media sharing (text files, zip files, etc.)	Not started ▾		Not Firm ▾	
Improved pinning/locking behavior and support for screen shares	Not started ▾		Not Firm ▾	
The ability to fully delete things	Not started ▾		Not Firm ▾	
Popups for links to show where they go	Not started ▾		Not Firm ▾	
Fix chat notification sounds not playing when on another tab	Not started ▾		Not Firm ▾	
The in-room objects count added to the objects panel button	Not started ▾		Not Firm ▾	
A leave room button in the lobby	Not started ▾		Not Firm ▾	
More granular room permissions	Not started ▾		Not Firm ▾	
USD loading support	Not started ▾		Not Firm ▾	

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Migrate spoke codebase to latest Node version	Not started ▾		Not Firm ▾	
Object snapping and mouse lock	Not started ▾	Dom's branch: https://github.com/Hubs-Foundation/hubs/tree/object-handling-spike	Not Firm ▾	
Iframes	Not started ▾	Potential starting point: https://github.com/Hubs-Foundation/hubs/tree/feature/iframes	Not Firm ▾	
Behavior graphs development (client, blender, spoke)	Not started ▾		Firm ▾	
Sight impaired accessibility	Not started ▾		Not Firm ▾	
Hearing impaired accessibility	Not started ▾		Not Firm ▾	
Full body/vrm avatar support	Not started ▾		Not Firm ▾	
Portals improvements	Not started ▾		Not Firm ▾	
Re-evaluation of the .spoke project format and potential migration to using GLBs or GLTFX files for projects	Not started ▾		Not Firm ▾	
Saving rooms as scenes	Not started ▾		Not Firm ▾	
The ability to convert GLBs to spoke projects	Not started ▾		Not Firm ▾	
Pen tool improvements	Not started ▾		Not Firm ▾	
Object manipulation improvements	Not started ▾	Gizmos(?), text input, axis constraints, possibly some sort of precision mode, etc. Potentially include onscreen instructions when manipulating	Not Firm ▾	
Improved backup/migration tools	Not started ▾		Not Firm ▾	
Spoke to pass through unrecognized components	Not started ▾		Not Firm ▾	
Spoke interaction gizmos fixed	Not started ▾		Not Firm ▾	
A new more flexible kit system based off of glTF variants for Spoke	Not started ▾	Mesh variant discussions: https://github.com/KhronosGroup/glTF/issues/2005	Not Firm ▾	

Project	Status	Notes	Firmness	Who's working on it
		https://github.com/KhronosGroup/glTF/pull/1790		
Custom subtags for Spoke user assets	Not started ⌄		Not Firm ⌄	
Element filtering in Spoke	Not started ⌄	Viewport, Assets browsers, Hierarchy tree	Not Firm ⌄	
Improved/additional visualizations/gizmos for the Blender add-on	Not started ⌄		Firm ⌄	
A performance report for Blender add-on	Not started ⌄		Firm ⌄	
A gizmo visibility option for the Blender add-on	Not started ⌄		Firm ⌄	
DM chats in Hubs via the people list	Not started ⌄		Not Firm ⌄	
The number of people in the room displayed on links to the room	Not started ⌄		Not Firm ⌄	
A leave room button in the lobby	Not started ⌄		Not Firm ⌄	
A preference for the object focus background color	Not started ⌄		Not Firm ⌄	
The ability to edit attributes of scene objects in room/per room	Not started ⌄	E.g. this would allow a scene creator to set up portals in the scene, but allow room moderators/owners to set the portal destination for that room.	Not Firm ⌄	
Improvements to the mobile ui	Not started ⌄	E.g. add fly and teleport buttons to the interface somewhere, etc..	Not Firm ⌄	
Improvements to the VR ui	Not started ⌄	E.g. https://github.com/Hubs-Foundation/hubs/pull/5434	Not Firm ⌄	
Log chat messages to a file on your local hard drive	Not started ⌄		Not Firm ⌄	
Swap object menu and teleport hotkeys	Not started ⌄		Not Firm ⌄	
Make hotkeys configurable in the preferences	Not started ⌄		Not Firm ⌄	
Better zooming / panning support in object focus/freeze mode	Not started ⌄		Not Firm ⌄	

Project	Status	Notes	Firmness	Who's working on it
Add a wireframe mode for the Hubs client	Not started ▾		Not Firm ▾	
GPU instance support	Not started ▾	Use EXT_mesh_gpu_instancing for glTF	Not Firm ▾	
Improved LOD support	Not started ▾		Not Firm ▾	
A default off option for highly anonymized telemetry	Not started ▾		Not Firm ▾	
Multi user support for Spoke	Not started ▾		Not Firm ▾	
Pocket dimensions	Not started ▾	Private rooms that use the current scene (or a predefined scene) that a group of people can slip into and that automatically close once the last person has exited (leaving the room takes you back to the initial room)	Not Firm ▾	
Theatre.js in-room animation system	Not started ▾		Not Firm ▾	
AI integration for object generation	Not started ▾		Not Firm ▾	
Gaussian Splat integration	Not started ▾		Not Firm ▾	
An AI add-on that detects harassment and automatically enters freeze mode (maybe hides everyone as well?)?	Not started ▾		Not Firm ▾	
Allow SSO accounts instead of/as well as Magic Link	Not started ▾		Not Firm ▾	
Add customizable keyboard shortcuts	Not started ▾		Not Firm ▾	
Build and run Hubs locally	Not started ▾		Not Firm ▾	
Add the ability to connect to Hubs using traditional IP v.4 address	Not started ▾	Want to explore why the OG Hubs team didn't do this.	Not Firm ▾	