OpenADx – xcelerate your Autonomous Driving development

Workshop #5 – 25th June 2019

Leinfelden-Echterdingen

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Agenda OpenADx Workshop #5 – Working Group Founding

Time			
09:00	**Registration**		**All**
09:45	Welcome, Agenda		Charles, Andy
10:00	Introduction to Eclipse Foundation		Mike Milinkovich
10:20	Why do we want to become an Eclipse Working Group?		Andy
10:30	OpenADx Charter Proposal - Two phases to form the working group - Phase 1 – Incubation period - Phase 2		Andy
11:00	**Coffee and Networking Break**		**All**
11:30	Presentation and interpretation of OpenADx Charter Proposal		Andy
12:30	**Lunch Break**		
13:30	"Unconference"	Steering Committee	Lars / Andy
15:00	Presentation Steering Committee Status		SC
15:15	Presentation "Unconference"		Team
15:30	**Coffee and Networking Break**		**All**
16:00	Open Source Platforms at Eclipse for building Model-based Engineering Tools (with SysML)		Philip Langer, EclipseSource
16:15	Status of OpenADx projects		Andy
16:30	Next steps for OpenADx		All
17:00	**End of OpenADx Working Group Forming Meeting**		**All**

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Introduction to Eclipse Foundation

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Why do we want to become an Eclipse Working Group?

OpenADx – Why an Eclipse Working Group?

- Legal Frame for Discussion and Collaboration
  - Prevent Anti-Trust issues
  - Legal Entity for common work, e.g., hosting/imprint of Website, domain ownership
  - Member neutral promotion organization
  - Funding body for common funded projects
  - Marketplace for idea sharing and solution provisioning
  - Application of Eclipse Foundation mechanisms like the open standardization process
  - Hosting of Open Source Activities and Open Source Management processes

- Ideas
  - Neutral Community Manager, organizing and fostering the community
  - Neutral Web Portal for AD solutions (including but not exclusively those provided by working group)
  - Commonly funded development projects
  - Commonly funded standardization projects
  - Tradeoff: Openness for collaboration vs. dependable planning and achievements in work packages

OpenADx – Why an Eclipse Working Group?

- What we achieved so far with support of the Eclipse Foundation …
  - We found a logo!
  - We have a new Web Page …
    - http://openadx.eclipse.org/
  - Draft Eclipse Foundation Working Group Charter
    - https://www.eclipse.org/org/workinggroups/openadx_charter.php
  - Participation Agreement
    - https://www.eclipse.org/org/workinggroups/wpga/openadx_working_group_participation_agreement.pdf
  - Entry Point on Eclipse
    - https://www.eclipse.org/org/workinggroups/explore.php

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Two Phases to form the OpenADx Eclipse Working Group

Forming the OpenADx Eclipse Working Group

Phase 1 - Incubation Period

- The OpenADx working group starts with an incubation period that runs through June 30, 2020. The goal of the incubation period is to
  - Refine the structure and strategy of the working group
    - Open charter
    - Preparation of working group collaboration and charter
    - Process creation
    - Steering Committee and decision-making
    - Initiation of first work package(s)
    - Work package proposals
    - Working group funding
  - Define membership levels and participation guidelines
  - Acquire new members for the working group
  - Develop and establish a funding model that enables this working group and its community to operate on a sustainable basis.

- During the incubation period, only three membership classes and one governance body are defined.

Forming the OpenADx Eclipse Working Group

Phase 2 – Regular work

- Phase 2 of the OpenADx working group starts July 1, 2020 and starts with
  - A clear strategy and structure of the working group (defined Charter)
  - Defined membership levels and participation guidelines
  - A defined funding of the working group
  - Collaboration mode, working on defined work packages in parallel

OpenADx – becoming an Eclipse Working Group

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Draft Charter for Eclipse Working Group

OpenADx – Eclipse Working Group Charter Proposal

Vision and Scope

- Autonomous driving (AD) is an extremely complex challenge with a complex development process, which is slowed at every turn by incompatibility between widely used development tools. The tools we already use in and of themselves are very good, but they do not work seamlessly with one another simply because they were never designed to work with each other. This is an industry-wide issue. It slows us all down in the race to automated driving. It costs money and precious resources to reduce the problem to a manageable level. And the thing about it is that the tool chain itself is not something we can monetize.
- All major stakeholders/users have issues associated with tool incompatibility, data conversion and lost time.
- We lessen this problem by creating the leading automated driving ecosystem ➢ **OpenADx**
- We leverage open collaboration and open source to
    - Accelerate time to market
    - Increase efficiency
    - Focus on customers

https://www.eclipse.org/org/workinggroups/openadx_charter.php

OpenADx – Eclipse Working Group Charter Proposal

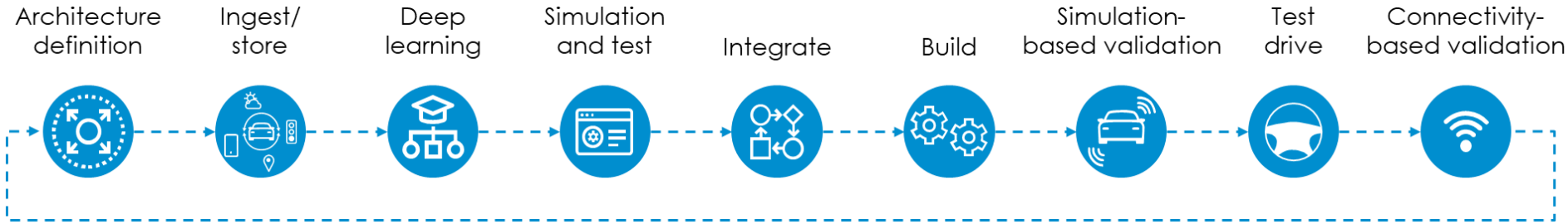
- It is the goal of this working group (WG) to deliver
  - An industry-wide accepted definition of the AD toolchain
  - A reference architecture defining the interoperability of interesting in scope technologies
  - Open Source projects for better interoperability and functionality of the established development tools

- The working group will:
  - Coordinate the development of related Eclipse Foundation projects towards an OpenADx framework.
  - Define and manage the specifications for interfaces and functions for the framework.
  - Promote the OpenADx framework and its value.
  - Provide a vendor neutral marketing and other services to the OpenADx ecosystem.
  - Define licensing and intellectual property flows that encourage community participation and tool adoption.
  - Drive the funding model that enables this working group and its community to operate on a sustainable basis.

OpenADx – Eclipse Working Group Charter Proposal

Technical Scope

- The OpenADx working group will coordinate the development of Eclipse Foundation projects on the following topics:
  - Implementation of interfaces between the development steps
  - Implementation of common standards from other working groups (e.g. VDA Leitinitiative)
  - Definition of an initial setup for fast implementation
  - Ensures interoperability between development stages



- Projects hosted by the Eclipse Foundation in the context of the OpenADx working group apply the Eclipse development process and best practices of openness, transparency and meritocracy. As such, these projects are open to participation by developers or contributors. They can submit contributions to the project that will be considered for inclusion by the project committers. Committer status is acquired by contributors after election by existing committers as described in the Eclipse Development Process.

OpenADx – Eclipse Working Group Charter Proposal

Incubation Period

- The OpenADx working group starts with an incubation period that runs through June 30, 2020. The goal of the incubation period is to
  - Refine the structure and strategy of the working group
  - Define membership levels and participation guidelines
  - Acquire new members for the working group
  - Develop and establish a funding model that enables this working group and its community to operate on a sustainable basis.
- During the incubation period, only three membership classes and one governance body are defined (see "Membership"). Participant members and Committers of associated Eclipse Foundation projects are expected to actively engage in the development of this working group and the acquisition of new members. The participation fees for the working group will be waived during this period (0 € / USD 0 for all members).
- The incubation period is concluded successfully if at least four Participant members have been acquired and a funding model for the group has been developed and agreed upon. From here on, the working group shall continue with an updated charter.
- If the operation of this working group cannot be ensured on a sustainable basis, it will be terminated after the incubation period.

OpenADx – Eclipse Working Group Charter Proposal

Governance and Precedence

- **Applicable Documents**
  - Eclipse Bylaws
  - Industry Working Group Process
  - Eclipse Membership Agreement
  - Eclipse Intellectual Property Policy
  - Eclipse Anti-Trust Policy
  - Eclipse Development Process
  - OpenADx Participation Agreement
- All Members must be parties to the Eclipse Foundation Membership Agreement, including the requirement set forth in Section 2.2 to follow the Bylaws and then-current policies of the Eclipse Foundation, including but not limited to the Intellectual Property and Anti-Trust Policies.
- In the event of any conflict between the terms set forth in this Working Group's Charter and the Eclipse Foundation Bylaws, Membership Agreement, Eclipse Development Process, Eclipse Industry Working Group Process, or any policies of the Eclipse Foundation, the terms of the Eclipse Foundation Bylaws, Membership Agreement, process, or policy shall take precedence.

OpenADx – Eclipse Working Group Charter Proposal

Membership

- In order to participate in the OpenADx working group, an entity must be at least a Solution Member of the Eclipse Foundation, have executed the OpenADx Participation Agreement, and adhere to the requirements set forth in this Charter.
- The OpenADx working group is open at any time to all new members who meet these conditions.
- During the incubation period, there are three classes of OpenADx working group membership – Interested Parties, Participant Members and Committer. Each of these classes is described in detail below.
  - **Classes of OpenADx Membership <u>during</u> incubation period**
    - **Interested Parties**
      - Interested Members are typically organizations that view an open toolchain as strategic to their organization. Interested Members are willing and allowed to work on and bring their ideas in this working group, but they have no voice in the decision process. Typical Interested Members include industry users of the technologies and results provided by the OpenADx working group.
    - **Participant Members**
      - Participant Members are typically organizations that view an open toolchain as strategic to their organization and are willing to invest significant resources to sustain and shape the activities of this working group. Typical Participant Members include industry users of the technologies and results provided by the OpenADx working group.
    - **Committer**
      - Committer Members are individuals who through a process of meritocracy defined by the Eclipse Development Process are able to contribute and commit code to the Eclipse Foundation projects included in the scope of this working group. Committers may be members by virtue of working for a member organization, or may choose to complete the membership process independently if they are not. For further explanation and details, see the "Eclipse Committer Membership" page.

OpenADx – Eclipse Working Group Charter Proposal

- **Classes of OpenADx Membership <u>after</u> incubation period**
  - The membership classes of the OpenADx WG are established to reflect the different interest situations of the members. The membership class has to be declared by the potential member in his OpenADx WG participation agreement. The membership class of each OpenADx WG member is checked once a year.
  - **Driver Members**

    Driver Members are typically organizations that view the OpenADx activities as strategic to their organization and are willing to invest significant resources to sustain and shape the activities of this working group as well as maintain the scope of OpenADx.

    Driver Members include industry users and strategic contributors related to the technologies and results provided by the OpenADx working group.

    Driver members will lead the operation of the working group, support the OpenADx projects and will act as first contact of the working group.
  - **Development Members**

    Development Members are organizations that are interested to benefit from the OpenADx community. They will lead or participate in OpenADx projects and investigate the technical questions. They will propose and execute the OpenADx projects according to the processes defined by the OpenADx working group. Development members will invest efforts to the OpenADx projects as defined in the proposal.

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- **User Members**

  User Members use the technologies and results provided by the OpenADx WG. They want to keep track of the OpenADx development but do not want to influence in an essential way.
  User Members are willed and allowed to work on and bring their ideas in this working group, but they have no voice in the decision process. Typical User Members include industry users of the technologies and results provided by the OpenADx working group. Most User Members operate testing processes as part of their core business.

- **Guests**

  Guests are organizations who have been invited for one year by the Steering Committee of OpenADx WG to participate in some aspects of the activities of the Working Group. Typical Guests include all stakeholders in automated driving and beyond, such as R&D partners, academic entities, legislators, consumer protection advocates, insurance companies, and potential future full-fledged members who want to have a closer look before deciding on their strategy. When Guests are invited to an OpenADx WG body for meetings, they have no right to vote. Invitations may be renewed by the Steering Committee. Guests are required to sign the participation agreement.

  Guests need to be at least Eclipse Associate Members.

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OpenADx WG Participation Fees

- The Steering Committee will establish annual participation fees, and these fees will be reviewed and ratified by the Steering Committee on an annual basis. All participants in the working group will be informed of any changes in the participation fees, and this charter will be updated to reflect the established participation fees. The OpenADx Participation Agreement will stipulate that all members agree to pay the participation fees. The Membership Fee Structure shown below lists proposed annual participation fees for the first year beyond incubation, and once ratified by the Steering Committee, will come into effect beginning July 1, 2020.
- In addition to annual participation fees, member organizations participating in OpenADx are expected to contribute employee service days to the benefit of the working group. Results for employee service days can be delivered as:
  - result packages or
  - service packages.
- The corresponding packages or services have to be offered in advance to and accepted by the steering committee.
- The Steering Committee shall establish an annual budget, and in conjunction with Eclipse Foundation staff, shall administer that budget on behalf of the working group.
- All members are welcome to make voluntary donations of both additional funding and employee service days to the benefit of the working group.

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- **Case of Violation**
- All members of OpenADx agree to adhere to the Eclipse Bylaws and this charter, including to meet their financial and employee service day commitments. The Steering Committee is responsible for auditing the employee service day contributions of members, and will inform Eclipse Management Organization (EMO) of any member failing to meet its commitments.

Governance

- This OpenADx working group is designed as:
  - a member driven organization,
  - a means to foster a vibrant and sustainable ecosystem of components and service providers,
  - a means to organize the community of each project or component so that users and developers define the roadmap collaboratively.
- In order to implement these principles, the "Steering Committee" as the sole governance body for the working group during the incubation phase has been defined.
- In addition, a general meeting of the working group, open to all members, shall be held at least once annually.

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Steering Committee

- **Powers and Duties**
- Steering Committee members are required to:
  - Define and manage the strategy of the working group.
  - Define and manage specification work packages and other non-implementation related activities within the scope of this working group.
  - Define and manage which Eclipse Foundation projects are included within the scope of this working group.
  - Define and manage the roadmap of the working group.
  - Review and ratify this charter.
  - Define the working group budget, annual participation fees and employee service days for all membership classes for each year.
  - Contribute to the acquisition of new working group members by actively engaging in community development and evangelism
- **Composition**
  - Each Participant Member of the working group has one seat on the Steering Committee.
  - Two seats are allocated to Committer Members. Committer Member seats are allocated following the Eclipse "Single Transferable Vote", as defined in the Eclipse Bylaws. Elected Committer Members have the right to participate in every Steering Committee meeting. They have no voting rights.
- **Meeting Management**
  - The Steering Committee meets at least twice a year.

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Common Dispositions

- The dispositions below apply to all governance bodies for this working group, unless otherwise specified. For all matters related to membership action, including without limitation: meetings, quorum, voting, electronic voting action without meeting, vacancy, resignation or removal, the terms set forth in Section 6 of the Eclipse Foundation Bylaws apply.

- **Voting**
  - For actions (i) approving specifications for adoption; (ii) amending the terms of the working group's Participation agreement; (iii) approving or changing the name of the working group; and (iv) approving changes to annual Member contribution requirements; any such actions must be approved by no less than two-thirds (2/3) of the representatives present at a committee meeting.
- **Term and Dates of Elections**
  - This section only applies to the Steering Committee. All representatives shall hold office until their respective successors are appointed or elected, as applicable. There shall be no prohibition on re-election or re-designation of any representative following the completion of that representative's term of office.
  - Elected representatives shall each serve one-year terms and shall be elected to serve from July 1 to June 30 of each calendar year, or until their respective successors are elected and qualified.

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- **Meetings Management**
  - All meetings may be held at any place that has been designated by resolution of the corresponding body. All meetings may be held remotely using phone calls, video calls or any other means as designated by resolution of the corresponding body.
- **Infrastructure**
  - The OpenADx Working Group uses the normal infrastructure provided to Eclipse projects, including, among others, mailing lists, forums, bug trackers, source code repositories, continuous integration servers, build servers, and web sites.
- **Community Building**
  - The Eclipse Foundation will provide access to its network of developers to facilitate the community building and the dissemination of the OpenADx innovations. The Eclipse Foundation will use its communication channels such as its Newsletter, Twitter, or LinkedIn channels to promote key OpenADx events and encourage its members to join and participate in the OpenADx working group.

OpenADx – Eclipse Working Group Charter Proposal

Membership Fee Structure

The following table lists: a) the annual Eclipse Foundation Solutions membership fees, shown here for convenience, and b) the OpenADx working group fees payable to the Eclipse Foundation Inc.

Annual Corporate Revenue	Eclipse Solutions Membership	WG Fees Driver Member	WG Fees Development Member	WG Fees User Member
> $250 million	$ 20,000	$ 0	$ 0	$ 0
> $100 Million <= $250 million	$ 15,000	$ 0	$ 0	$ 0
> $50 million <= $100 million	$ 10,000	$ 0	$ 0	$ 0
> $10 million <= $50 million	$ 7,500	$ 0	$ 0	$ 0
< $10 million	$ 5,000	$ 0	$ 0	$ 0
< $1 million, < 10 employees	$ 1,500	$ 0	$ 0	$ 0

Additionally, each member has to provide annual employee service days to the WG, measured in manpower units / money:

- Driver Member: 90 employee service days / year, additionally $ 5.000 / year
- All other Member Classes (except Guest Member): 10 employee service days / year

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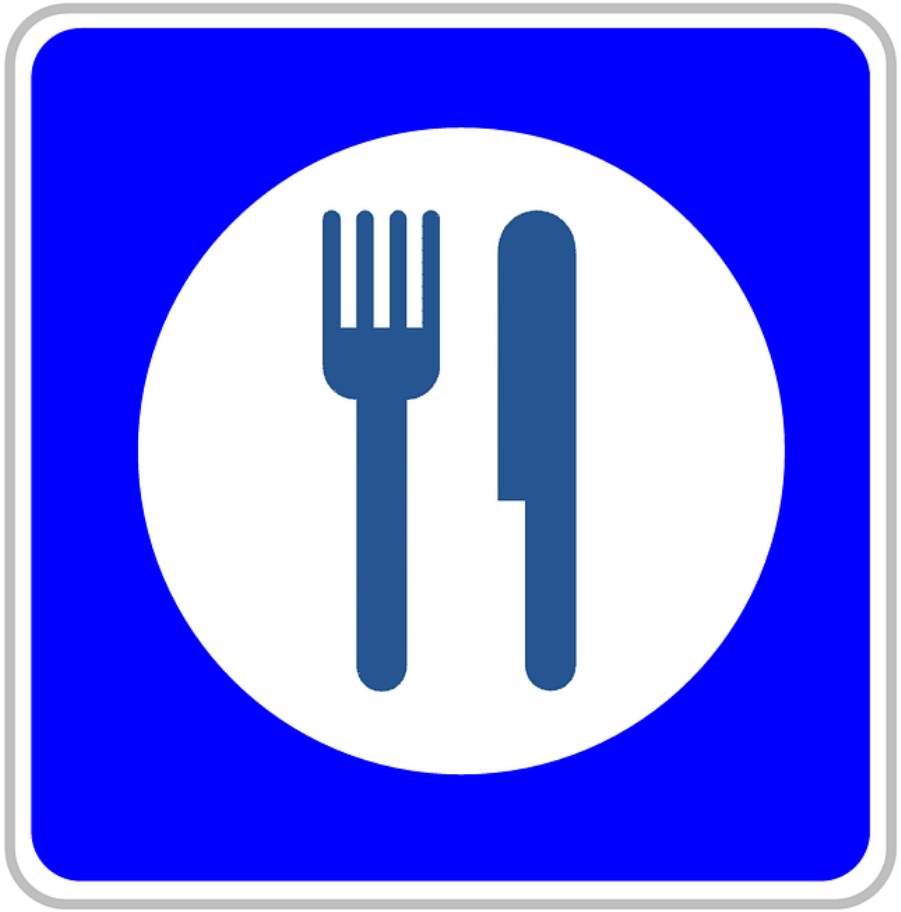
Membership Privileges

Privilege	Driver Member	Development Member	User Member	Guests
Steering Committee	X	Elected	Elected	-

https://www.eclipse.org/org/workinggroups/openadx_charter.php

OpenADx – becoming an Eclipse Working Group



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"Unconference" and first "Steering Committee Meeting"

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Presentation “Steering Committee Meeting”

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Presentation “Unconference”

OpenADx – becoming an Eclipse Working Group

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Open Source Platforms at Eclipse for building Model-based Engineering Tools (with SysML)

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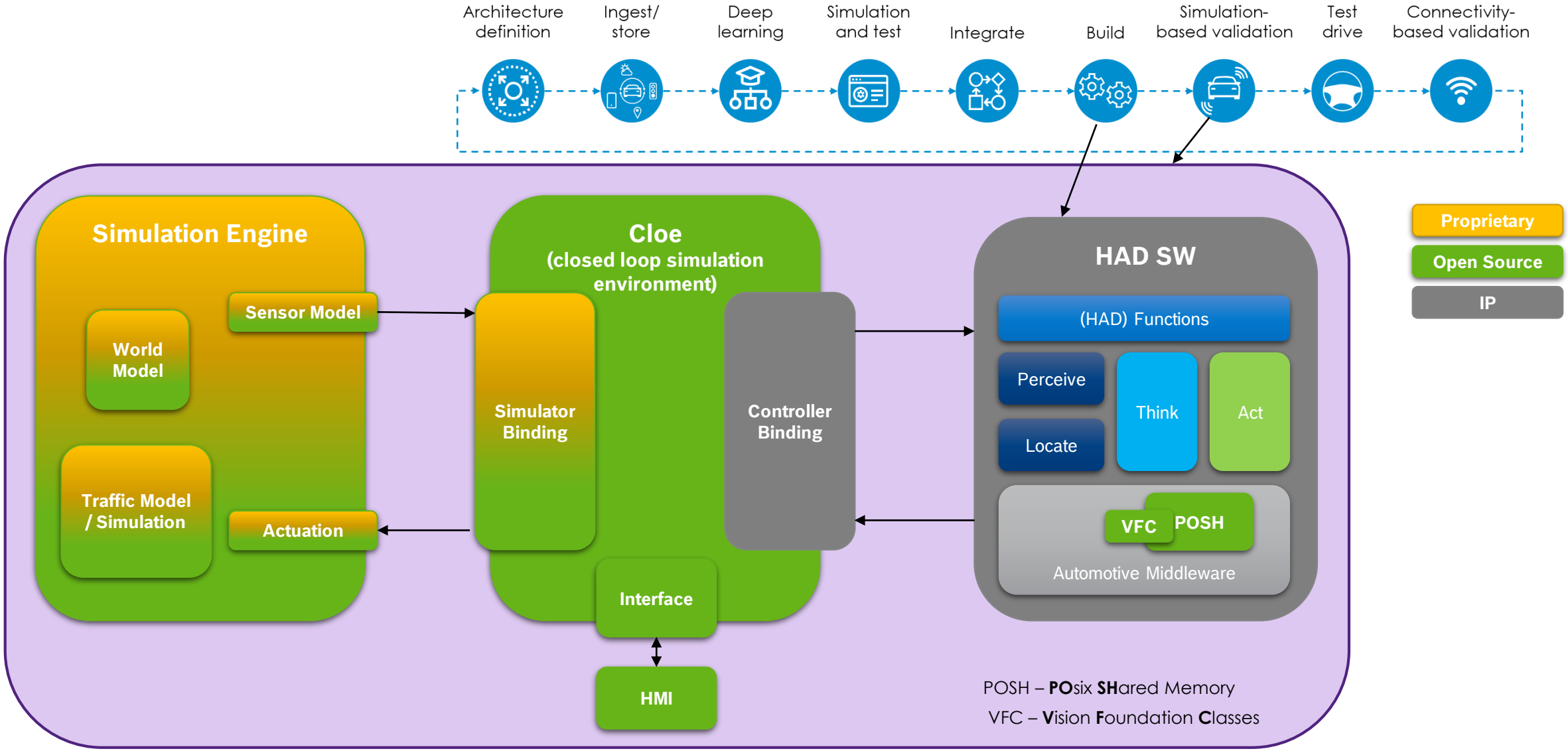
Status of OpenADx projects

Simulation Middleware – Cloe



Simulation Middleware – Cloe

Current state

- Eclipse Cloe Project Proposal in "Community Review"
  - https://www.eclipse.org/projects/tools/proposals.php
  - https://projects.eclipse.org/proposals/eclipse-cloe

- Code cleanup in execution

Status of OpenADx projects

Feedback from the community about further projects?

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Next steps

Thank you!

https://wiki.eclipse.org/OpenADx