

Way Ahead for xAPI

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ADL Initiative

In 15 Seconds, What is xAPI?



- Technical Specification (Targeting Standardization)
- Actor-Verb-Object Structure
- Human and Machine Readable

What is a Learning Record Store (LRS)?



- ← This, but digital
- Sharing Across Systems
- Mandates Retrieval

What can xAPI Do?



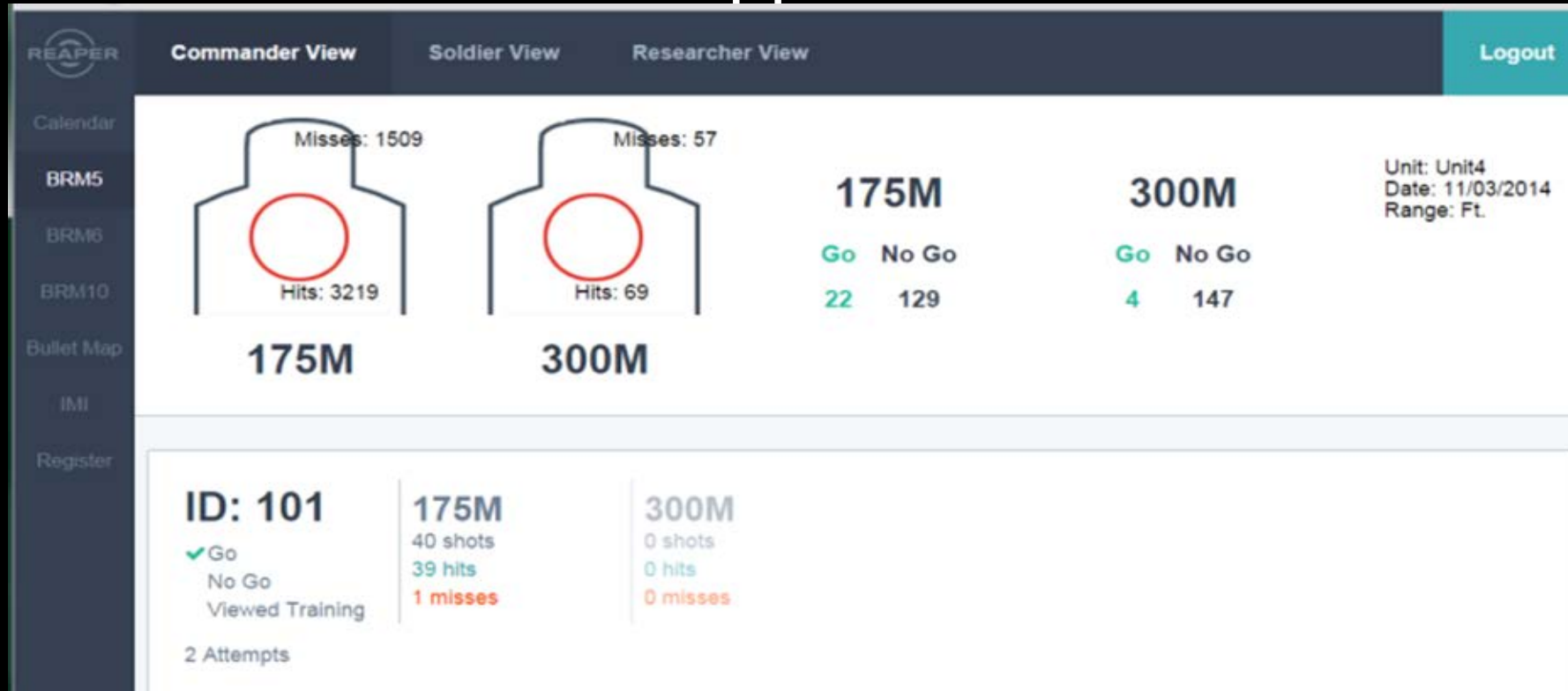
- Limitless Interaction Types
- Separate Data from PII
- Sensor + Performance + Learning Data = Win

What Can xAPI Do?



- Enable ROI Data
- Improved Instruction
- Find Outliers

DoD Applications



- Enable Instructors
- Enable Visualizations and Analytics
- Insight into Competency

DoD Applications



Home Maintenance Checklist									
Tasks:		Frequency	Completed	Frequency	Completed	Tasks:		Frequency	Completed
Foundation and Basement						Interior Surfaces			
Inspect for signs of moisture and water damage						Check finished surfaces for dirt, dust before and after painting			
Check grout to ensure that water will drain away from foundation						Check all joints in concrete, tile, laminated glass and similar surfaces			
Check basement for dampness or mold following wet weather						Check cracks or grouting around soffits, chimneys and pipes			
Doors and Windows						Floors			
Check doors, windows and trim for leaks before winter weather						Check for wear and damage, particularly where carpet meets stairs and other			
Check glass panes for loose panes						Schedule for replacement and refinishing			
Check for broken glass and damaged panes						Electrical System			
Take down screens, clean and store them						Check condition of all wiring to appliances and outlets			
Lubricate window hardware						Check smoke alarm wiring is installed and replace at first sign of trouble			
Check weatherstripping for damage and tighten as needed						Check smoke detectors			
Check caulking of doors, windows, and all other openings and joints between different materials						If flame detector or ionization fire frequency, call an electrician to locate the cause and make needed repairs			
Exterior Walls						Heating and Cooling Systems			
Check exterior for cracks and damage						Clean or change air filters			
Check exterior surfaces for peeling paint						Check system (cleaned by qualified person)			
Check siding and trim for damage or decay						Remove window air conditioner for winter			
Check all areas for signs of ice or snow buildup						Clean dirt and dust from around furnace, conditioning coils, and registers			
Roof						Service furnaces and air conditioning			
Check for damaged or loose shingles						Plumbing System			
Check underside of roof where accessible for water stains or damage						Check faucets for leaks, flush valves and valves for toilets and showers			
Check for damaged trim around vents and windows						Have annual professional drain system test			
Check for damaged gutters, downspouts, hangers, brackets, and splash blocks						Check water heater for leakage, corrosion or discoloration			
Clean gutters, downspouts, downspouts, and splash blocks						Grounds and Yards			
Check vents, downspouts, and splash blocks and keep them clear of debris						Trim around water lines and trees			
Check flower and shrub for pest damage and decay						Check area with, window wells and vent pipes			
Check exterior walls and trim for damage						Check drainage and sidewalks for cracks			
Inspect roof for future replacement						Check yard for soil erosion			

DoD Applications



- More Refined Data
- Across Sims and HR Systems
- Pinpoint Knowledge / Performance Gaps

DoD Applications



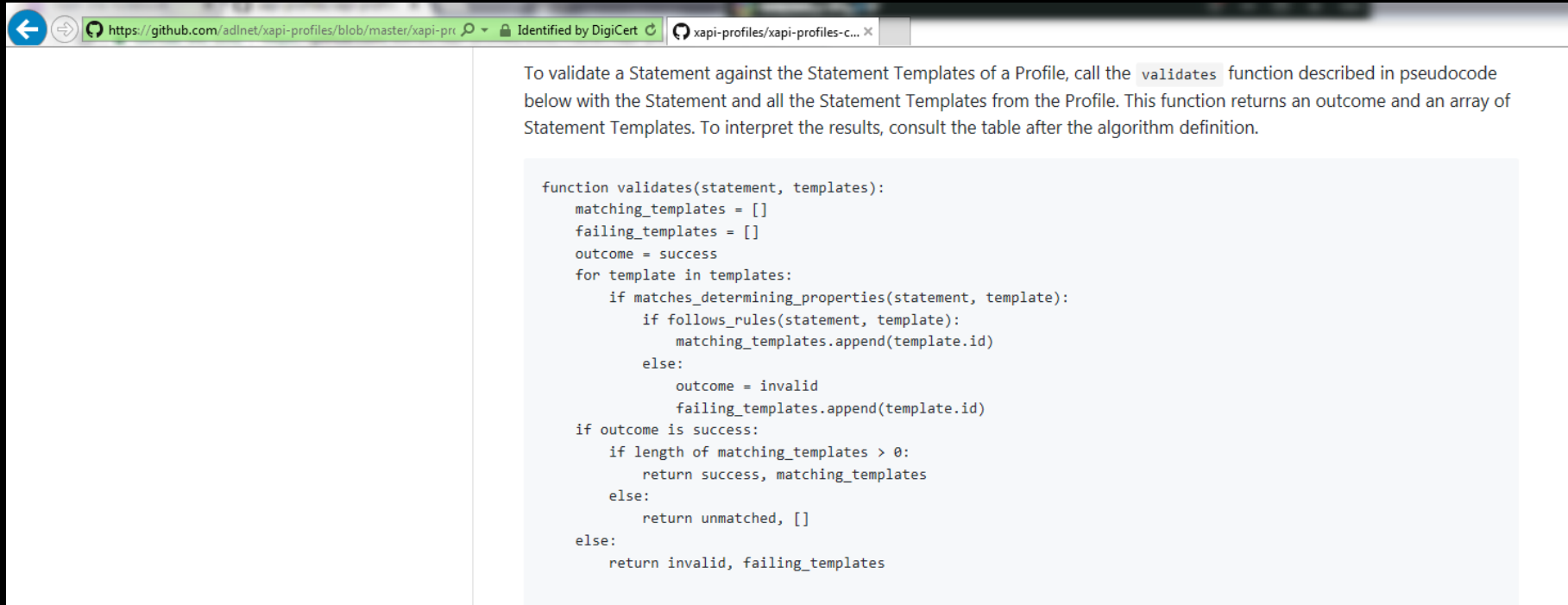
- Considerable Need for DL
- Most Generated by Authoring Tools
- More Reaching To Assist Vendors

Cmi5 for Content Authoring



- Look for cmi5 in Authoring Tools
- LMS + xAPI = cmi5
- Cmi5 Support INCLUDES xAPI Support

xAPI Profile Specification



The screenshot shows a web browser window with the URL <https://github.com/adlnet/xapi-profiles/blob/master/xapi-profiles-c...>. The page content describes the `validates` function and includes the following pseudocode:

```
function validates(statement, templates):
    matching_templates = []
    failing_templates = []
    outcome = success
    for template in templates:
        if matches_determining_properties(statement, template):
            if follows_rules(statement, template):
                matching_templates.append(template.id)
            else:
                outcome = invalid
                failing_templates.append(template.id)
    if outcome is success:
        if length of matching_templates > 0:
            return success, matching_templates
        else:
            return unmatched, []
    else:
        return invalid, failing_templates
```

- Template of Technical Rules
- Validates Sets of Statements
- Employs Semantic Web Principles

What Are These Profiles?



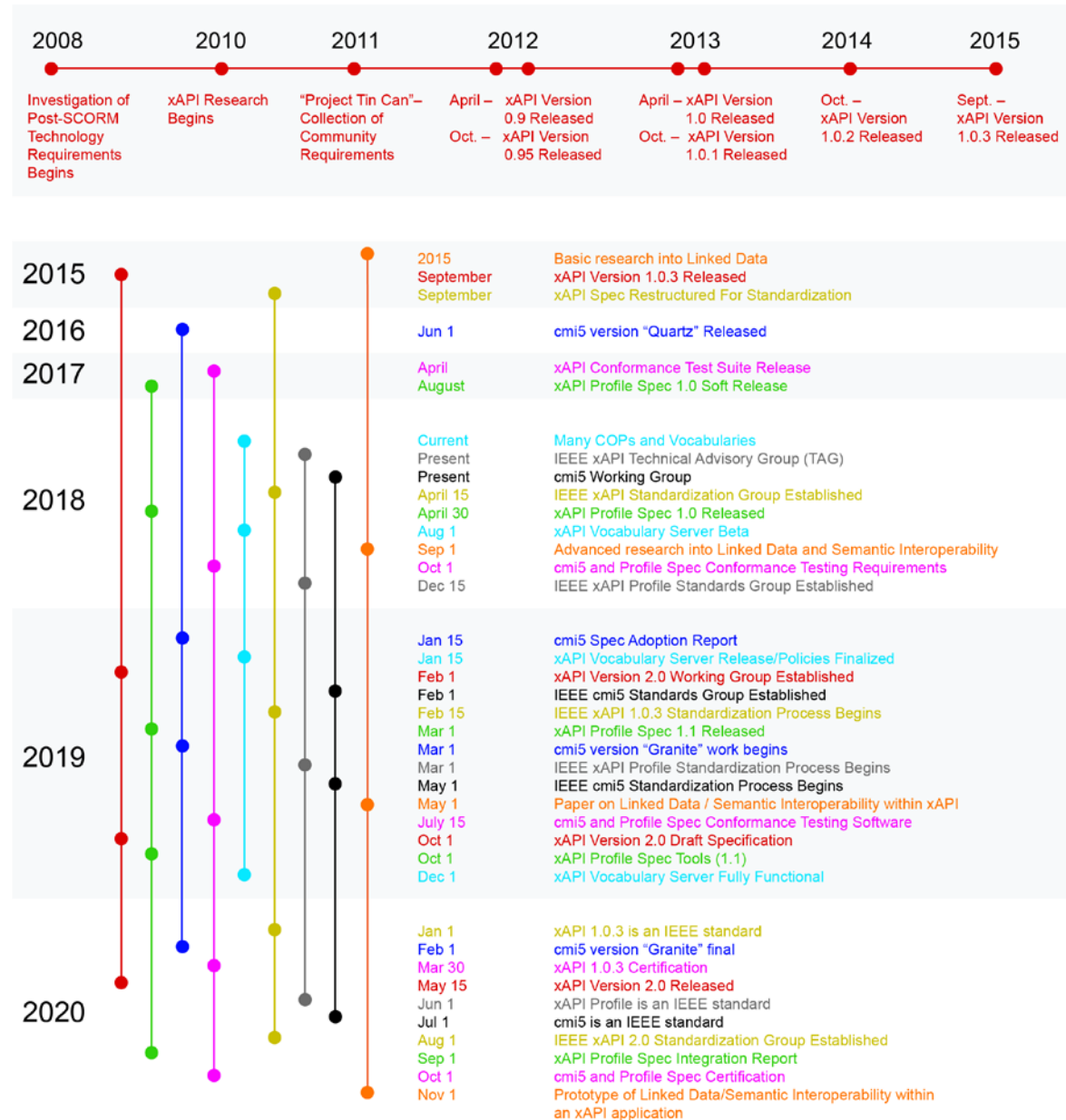
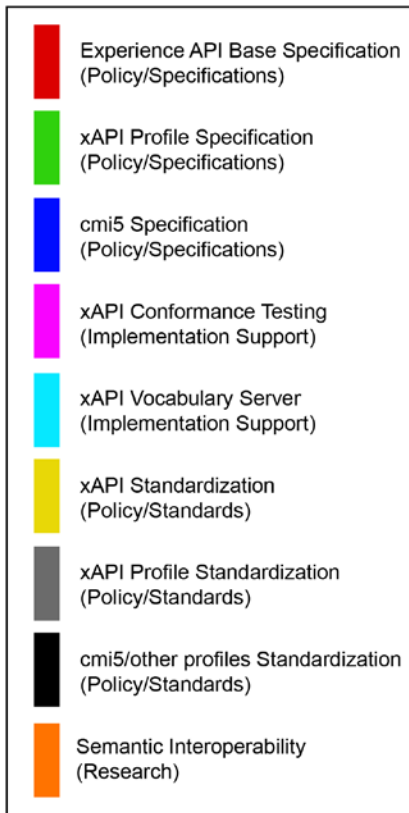
- Traditional Distributed Learning
- Specific Modes of Delivery
- Instructional Types

DoD Instructional Design Profile

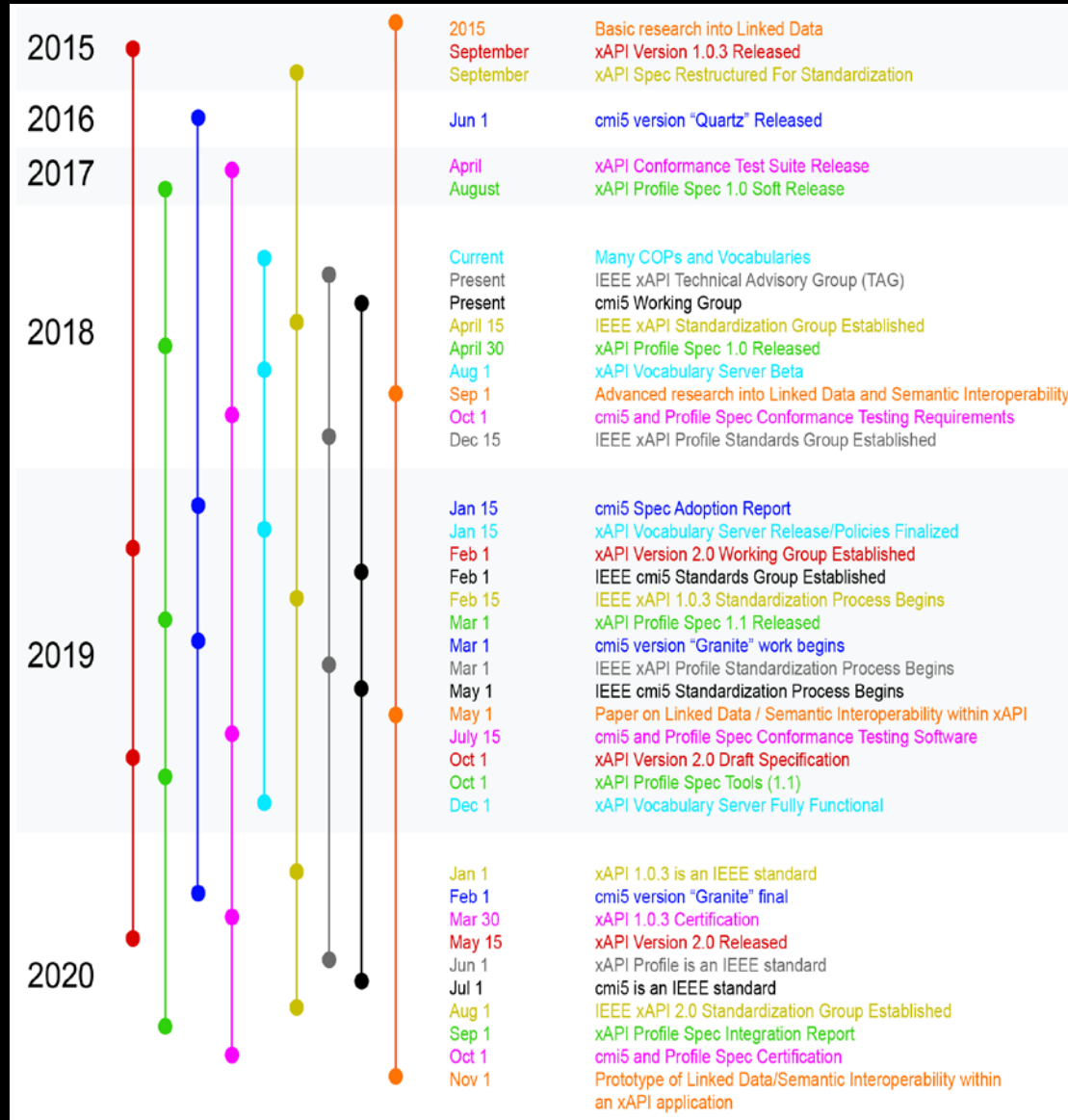


- Profile Developed for the U.S. Air Force
- Focus is Verbs in Conjunction with IMI Levels
- Suggest Open Collaboration for Revision and Adoption

xAPI Modernization Timeline

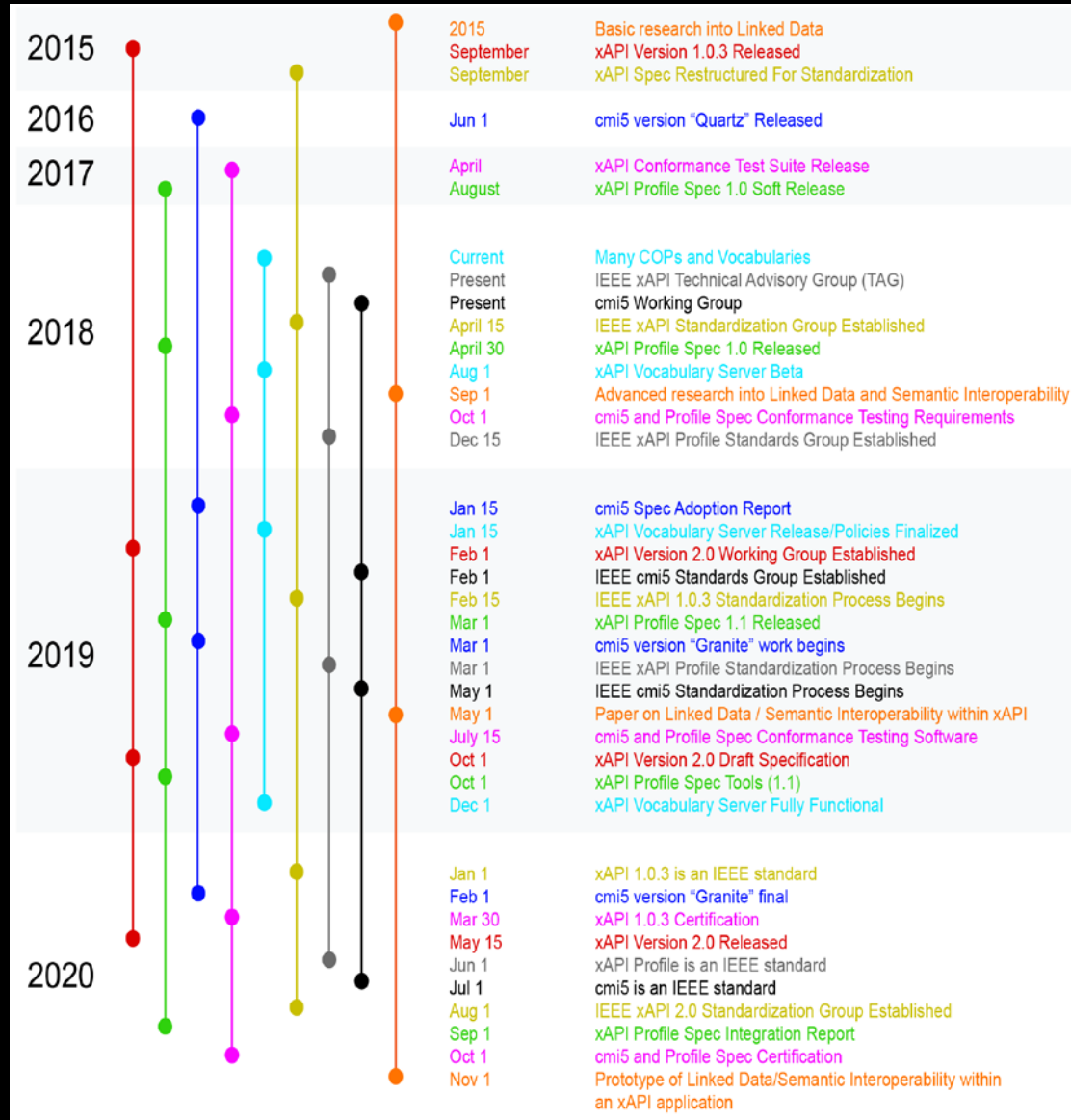


xAPI Standardization (Yellow)



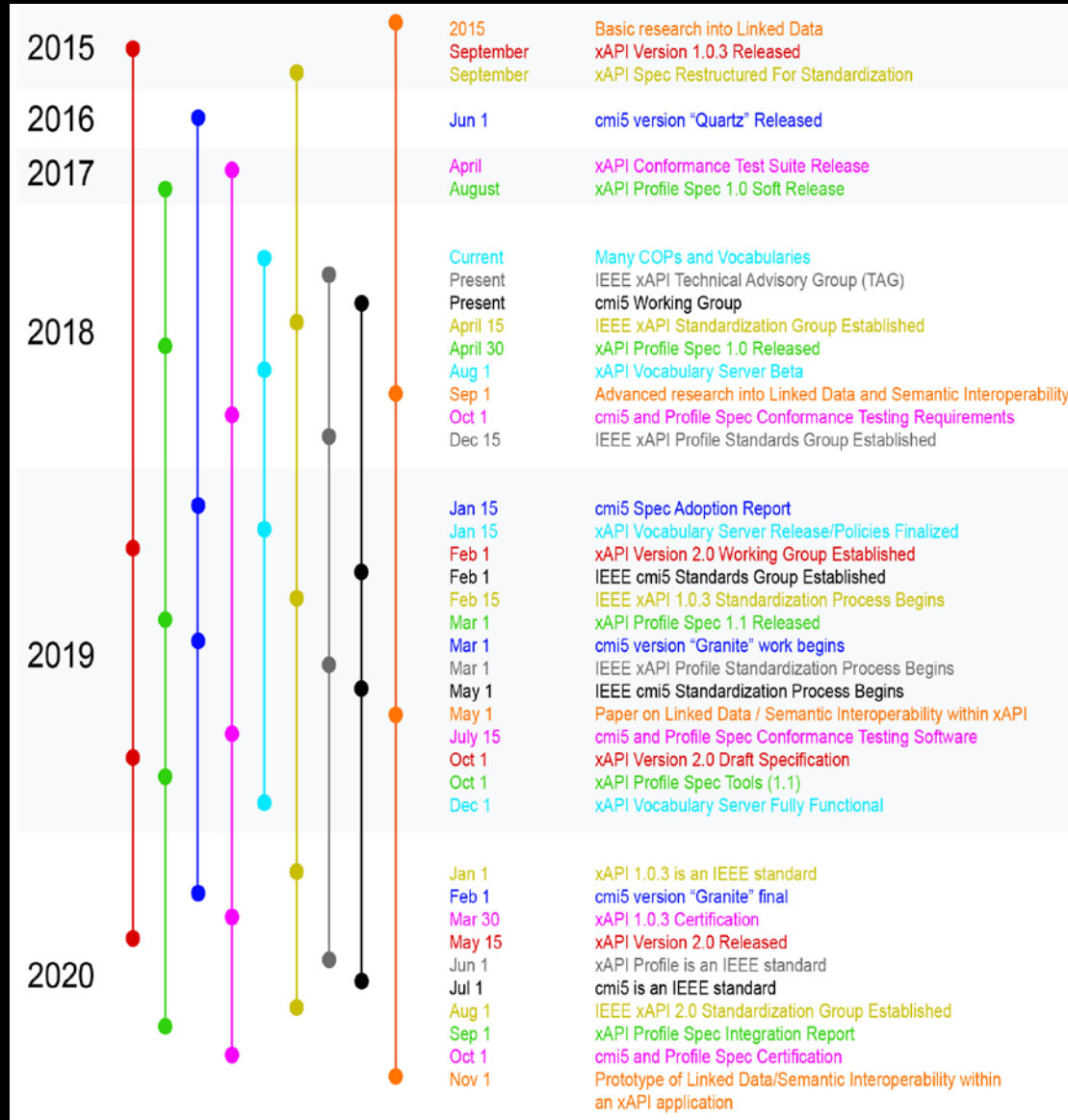
- IEEE Approved Working Group
- By Early 2019, re-Issued for Ballot
- xAPI a Standard by Ball-drop 2019

cmi5 Standardization (Black)



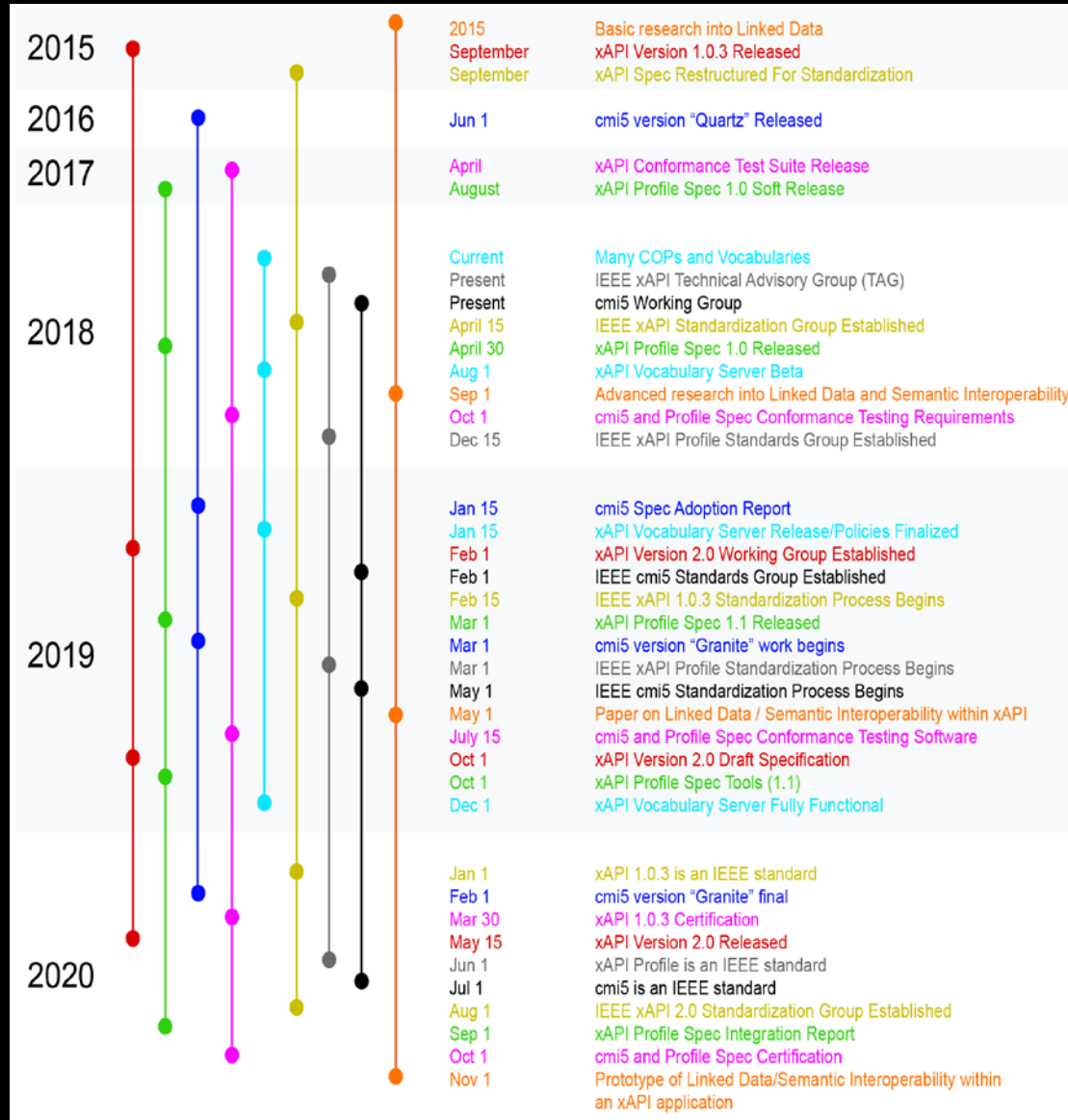
- Finalized Requirements and Procedures
- Establish IEEE group in 2019
- Summer of 2020 – a Standard

xAPI Profile Standardization (Grey)



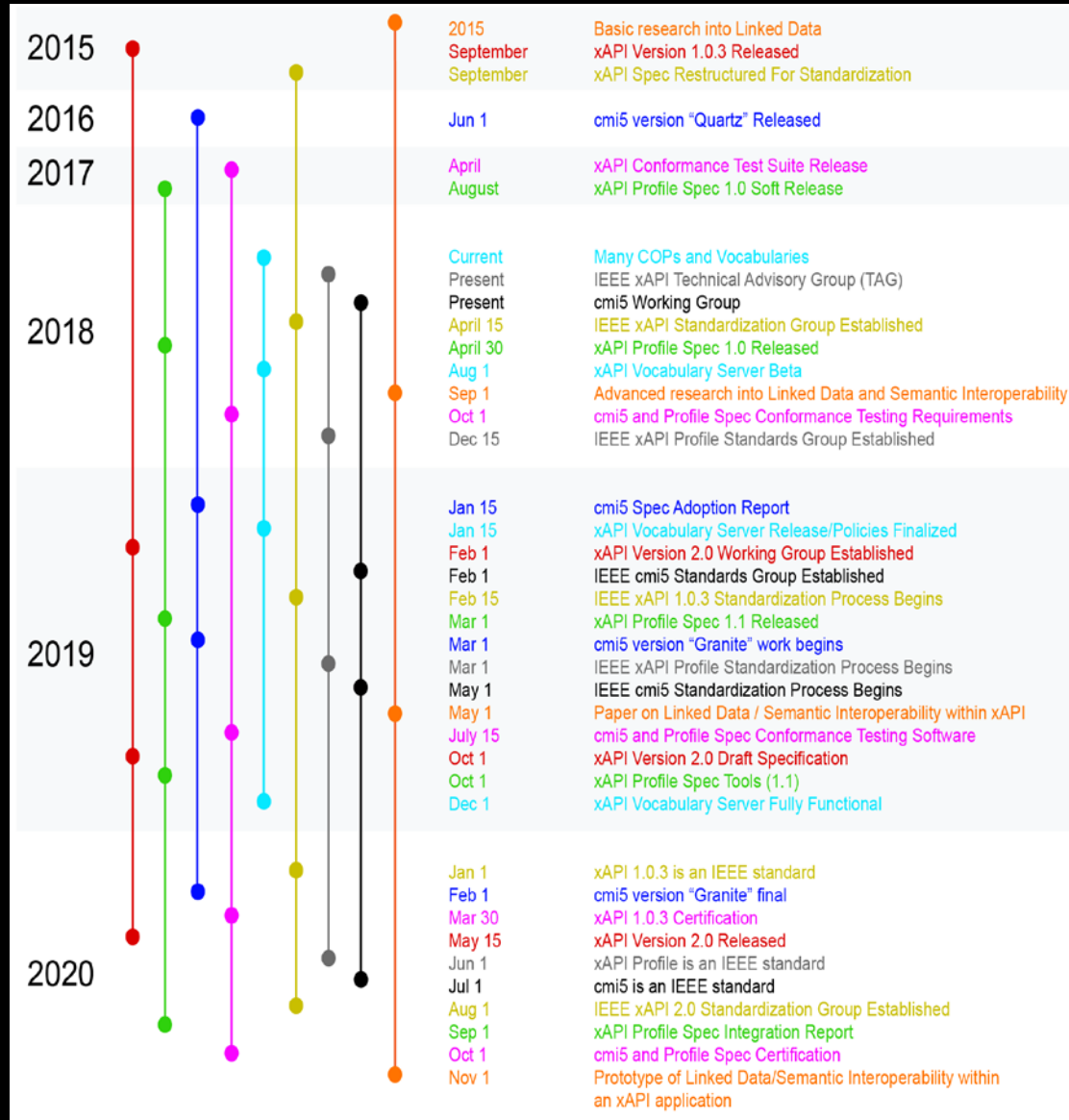
- Slow Evaluation
- IEEE will Give it a Kick in late 2018
- Summer of 2020 – a Standard

xAPI Conformance Testing (Pink)



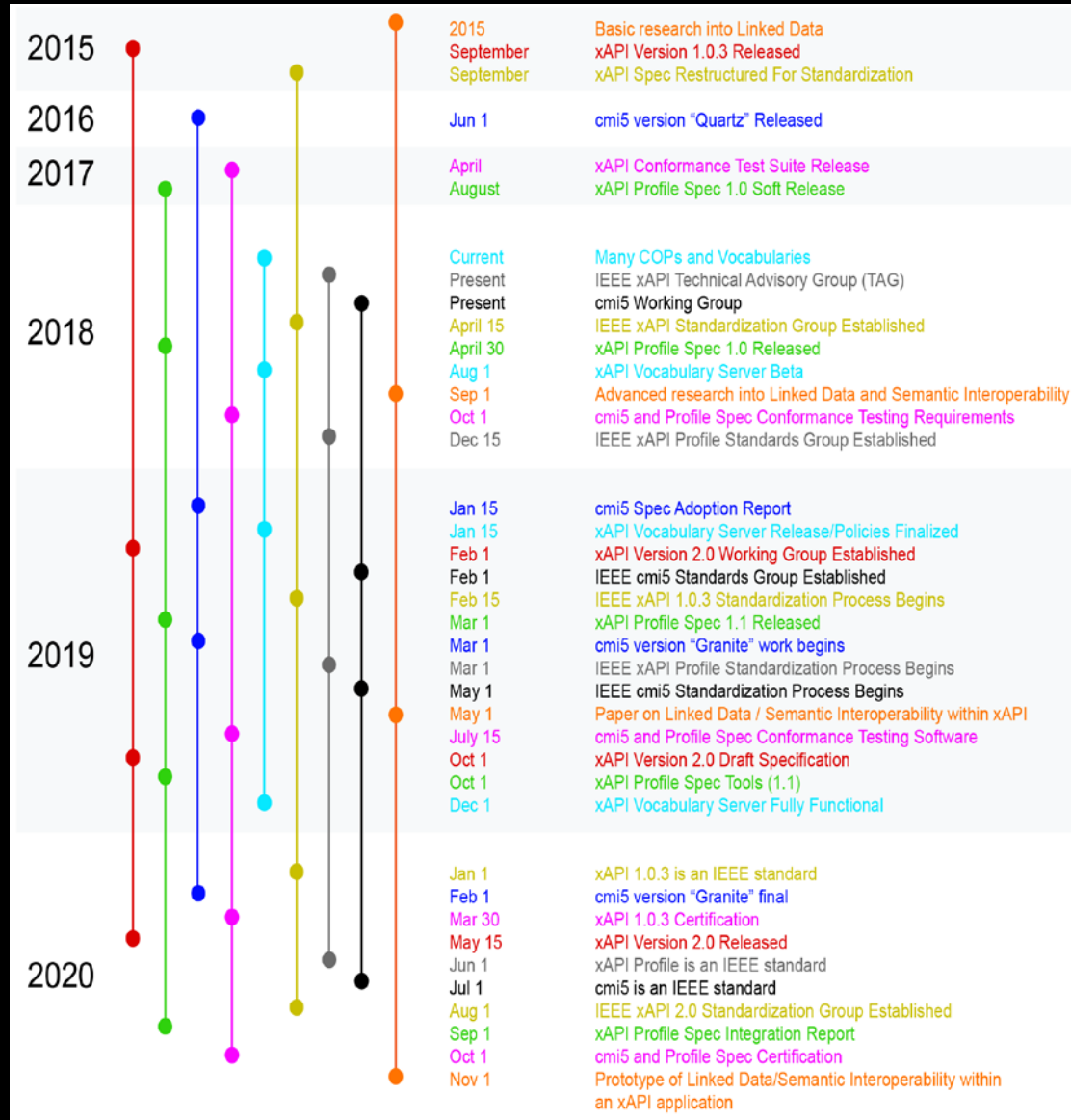
- LRS Test Suite Exists
- Cmi5/Profile Requirements 2018
- Cmi5 and Profile Software in 2019
- Certification Processes in 2020

xAPI Vocabulary Server (Light Blue)



- Vocabulary Server in Beta
- Policies in place early 2019
- Full capacity end of 2019

xAPI 2.0 (Red)



- Benefits of 2.0 Established
- IEEE Working Group Early 2019
- Draft Version by Oct 2019
- Release in May 2020

xAPI – The Time Is Now





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Thank You!