

# The Butterfly Effect of Standards Development



**Small Cause**



**Large Effect**



**Butterflies (and Standards) have an origin story.**





# Starting the Lifecycle

Gatherings known for idea generation:

- Internet Identity Workshop (IIW)
- IETF BOFs
- W3C Community Groups

Ideas generated rapidly (in clusters)

Not all ideas may not be long-term viable

Hypothetical discussions allow freedom

**Influence: Ideas and Discussion**

***Influence at this stage is most effective,  
but results may be difficult to quantify***



# Ideas Form Legs

Groups form to discuss ideas in detail and to work on creating a draft document:

- IETF Working Groups
- W3C Community Groups, part 2
- OIDF Working Groups

Discussion of ideas may consume a large amount of time and effort

Each participant has a motivating incentive (and they sometimes conflict)

**Influence: Drafts and Comments**

***Influence at this stage requires a careful consideration of time and incentives***



# Implementation Starts

Implementation of standards develop

Standards may have minor refinement as ideas meet reality

May be difficult to perceive growth or progress

*Open-source implementations can assist others in development and interoperability*

**Influence: Implementations**

***(Quality = Progress)***

***Influence at this stage requires a higher level of investment (implementation, etc.)***



# Adoption Progresses

Standard is adopted via existing implementations in real-world deployments

May take several years

Continued discussions about details and future work on adopted standard

**Influence: Adoption and Deployment**

*(More adoption benefits all involved)*

***Influence at this stage mainly consists in adoption or continued promotion of the standard***



**And the point is?**



# The Evolution of Standards

**ISO**

**Proposal**

**Preparatory**

**Committee**

**Enquiry**

**Approval**

**Publication**

**OIDF**

**Draft**

**Implementer's Draft**

**OIDF Board Review /  
Member Vote**

**Final  
Specification**

**W3C**

**1<sup>st</sup> / 2<sup>nd</sup> / 3<sup>rd</sup>  
Public  
Working Draft**

**W3C  
Director  
Approval**

**Candidate  
Recommendation**

**Proposed  
Recommendation**

**Advisory  
Committee  
Review**

**W3C  
Recommendation**

**IETF**

**WG Adoption**

**WG Last Call**

**IETF Last Call**

**Proposed Standard**

**Internet Standard**

**#identiverse**

- The time to get involved in standards development is early in its lifecycle
- Your value-add comes from how well you implement, not how far you go to be unique
- If you want to implement well, you need to be a part of the process