



# OpenSplice|DDS

Delivering Performance, Openness, and Freedom

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## Roadmap and Technology Incubators



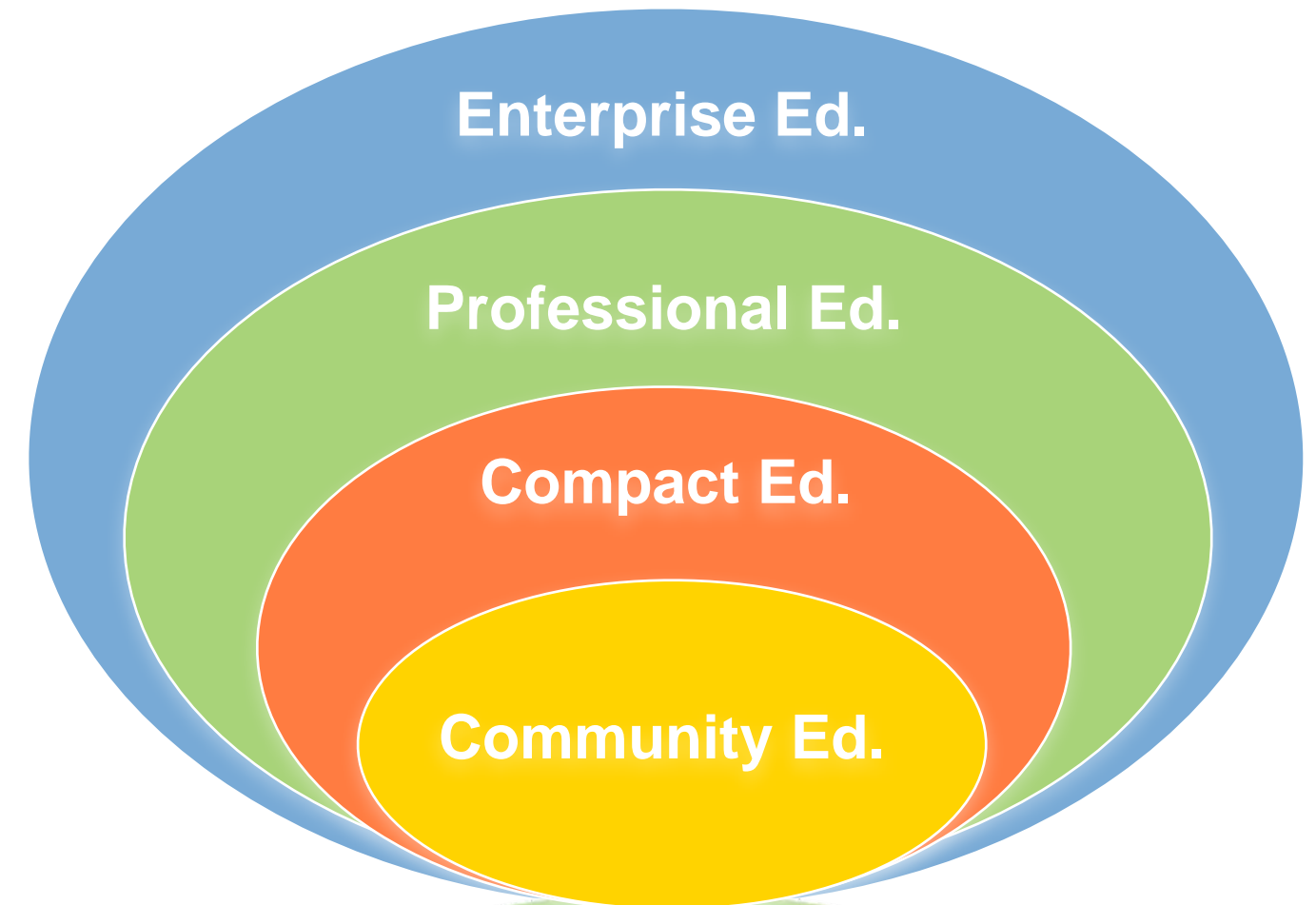
# OpenSplice|DDS

Delivering Performance, Openness, and Freedom

Key Coordinates...

# OpenSplice DDS

- ▶ Product reorganized into Editions
  - ▶ Community Edition
  - ▶ Compact Edition
  - ▶ Professional Edition
  - ▶ Enterprise Edition
- ▶ Product Editions provide a a growing set of functionality to address the needs of increasingly more sophisticated users
- ▶ The Community Edition is Open Source
- ▶ Compact, Enterprise and Professional Edition are available only through Commercial Subscriptions



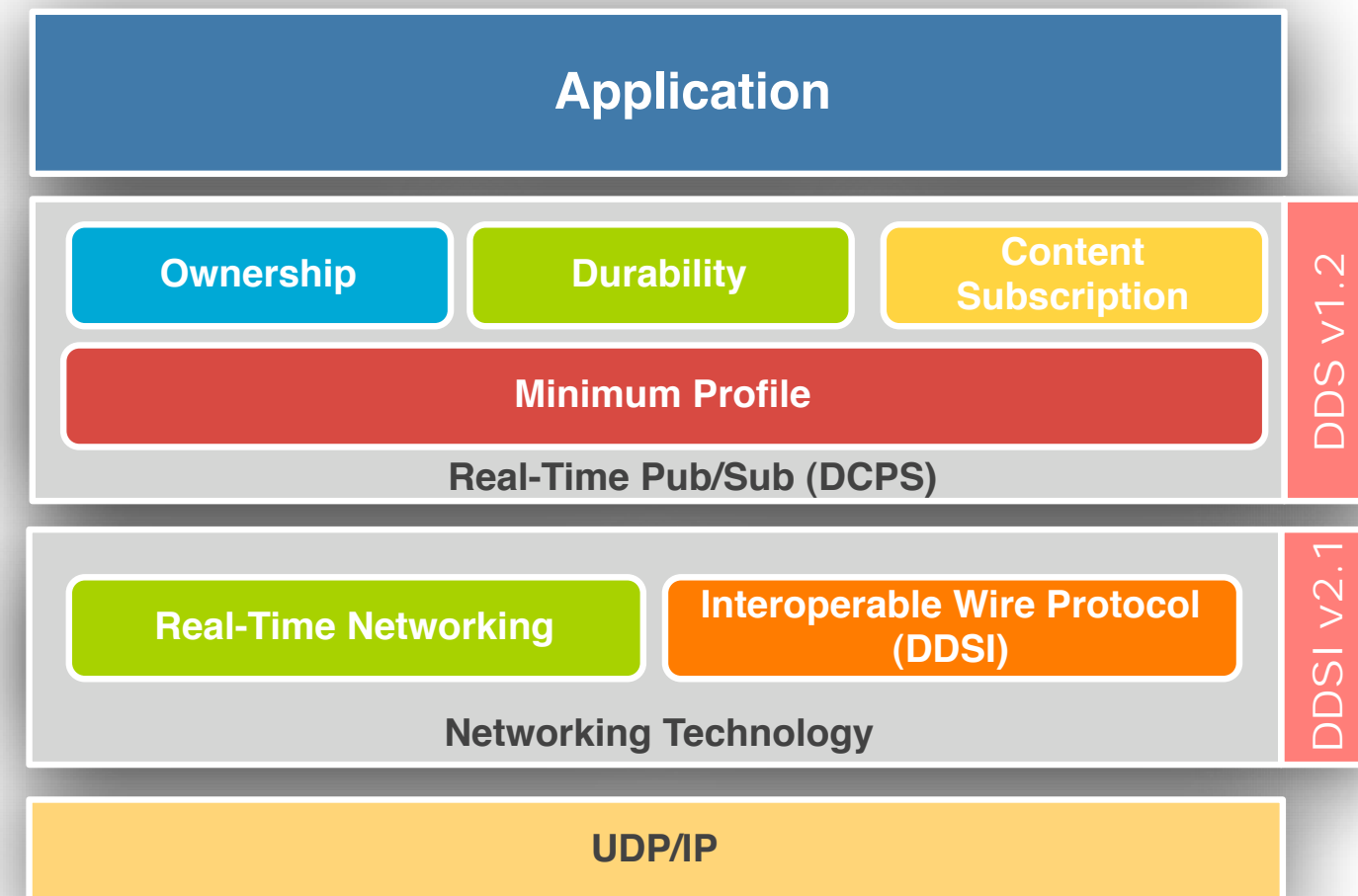
# Community Edition

## Features

- ▶ **OMG DDS v1.2 DCPS**
  - ▶ Minimum Profile
  - ▶ Content Subscription Profile
  - ▶ Durability Profile
  - ▶ Ownership Profile
- ▶ **Networking**
  - ▶ DDSI v2.1 Implementation
  - ▶ Real-Time Networking Implementation

## Licensing

▶ LGPLv3



*Open Source LGPL Licensed Edition – The Best Way to Get Started with DDS*



## OpenSplice DDS Community

### Site Topic Map

#### WebHome

- [About](#)
- [Acknowledgments](#)
- [Building](#)
  - [ContributeBuild](#)
- [Contributing](#)
  - [ChangeProcess](#)
  - [CodingStandards](#)
- [Documentation](#)
- [Downloading](#)
  - [DownloadSignUp](#)
  - [RepositoryAccess](#)
- [FAQ](#)
- [Help](#)
  - [BugReporting](#)
  - [CommercialSupport](#)
  - [Contact](#)
- [Installing](#)

### Community Web Utilities

- - [advanced search](#)
- [WebTopicList](#) - all topics in alphabetical order
- [WebChanges](#) - recent topic changes in this web
- [WebNotify](#) - subscribe to an e-mail alert sent when topics change
- [WebRss](#), [WebAtom](#) - RSS and ATOM news feeds of topic changes



### OpenSplice DDS Community Site

- [About OpenSplice DDS Community Edition](#)
- [Obtaining OpenSplice DDS Community Edition](#)
- [Building OpenSplice DDS Community Edition from Source](#)
- [Installing an OpenSplice DDS Community Edition distribution](#)
- [Getting Help](#)
- [Frequently Asked Questions](#)
- [OpenSplice DDS Community Edition Documentation](#)
- [Contributing to OpenSplice DDS Community Edition](#)
- [OpenSplice DDS Community Edition Acknowledgments](#)

\* <http://www.opensplice.org/>

# OpenSplice|DDS

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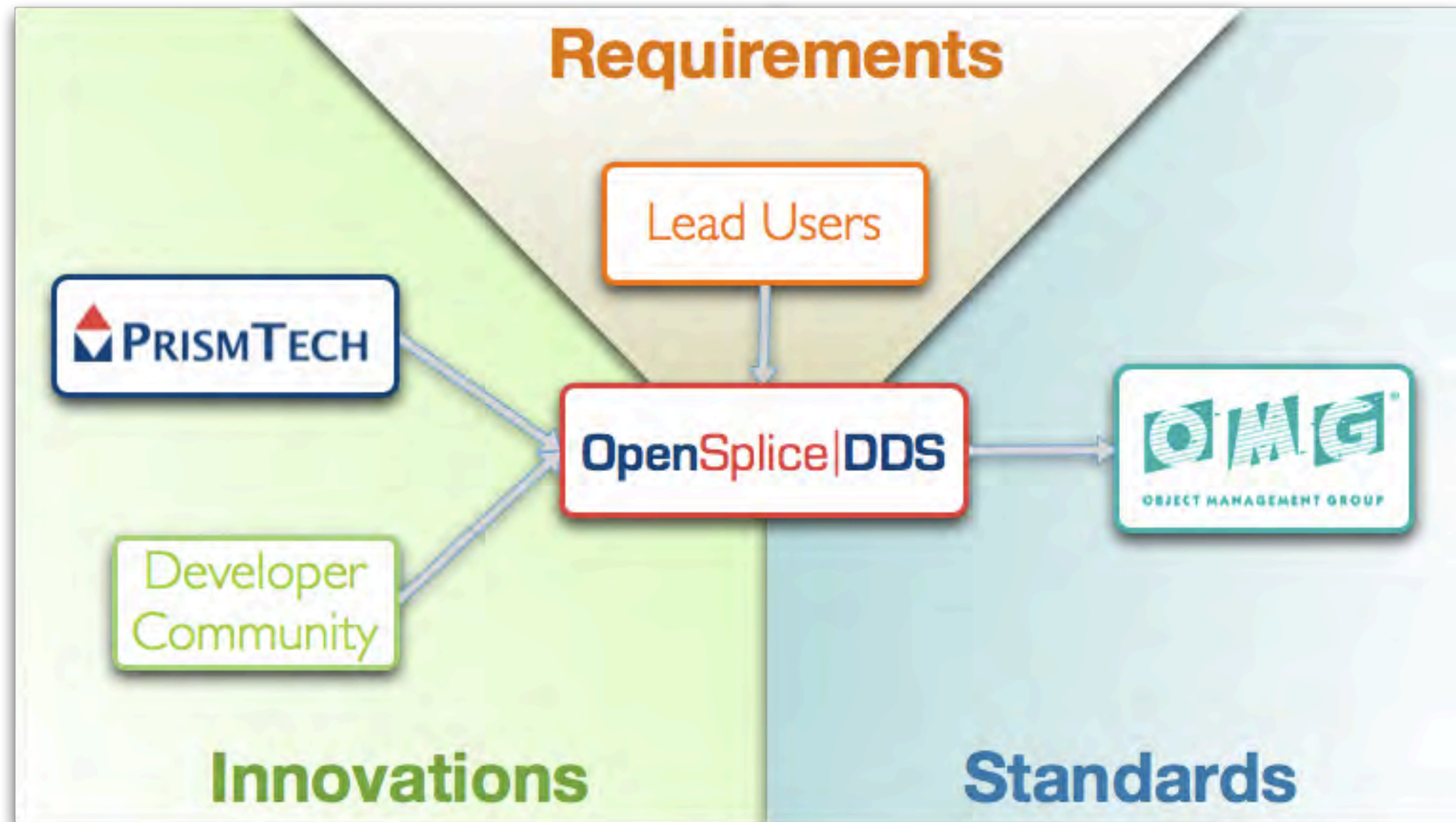
Innovation Process



# Innovation Process

## Three Well Balanced Dimensions

- ▶ PrismTech and the Developers Community inject innovations into OpenSplice DDS
- ▶ Lead Users pose new requirements and validate innovations
- ▶ Innovations and lead-users requirements are used to thrive standardization at the OMG



# OpenSplice|DDS

Delivering Performance, Openness, and Freedom

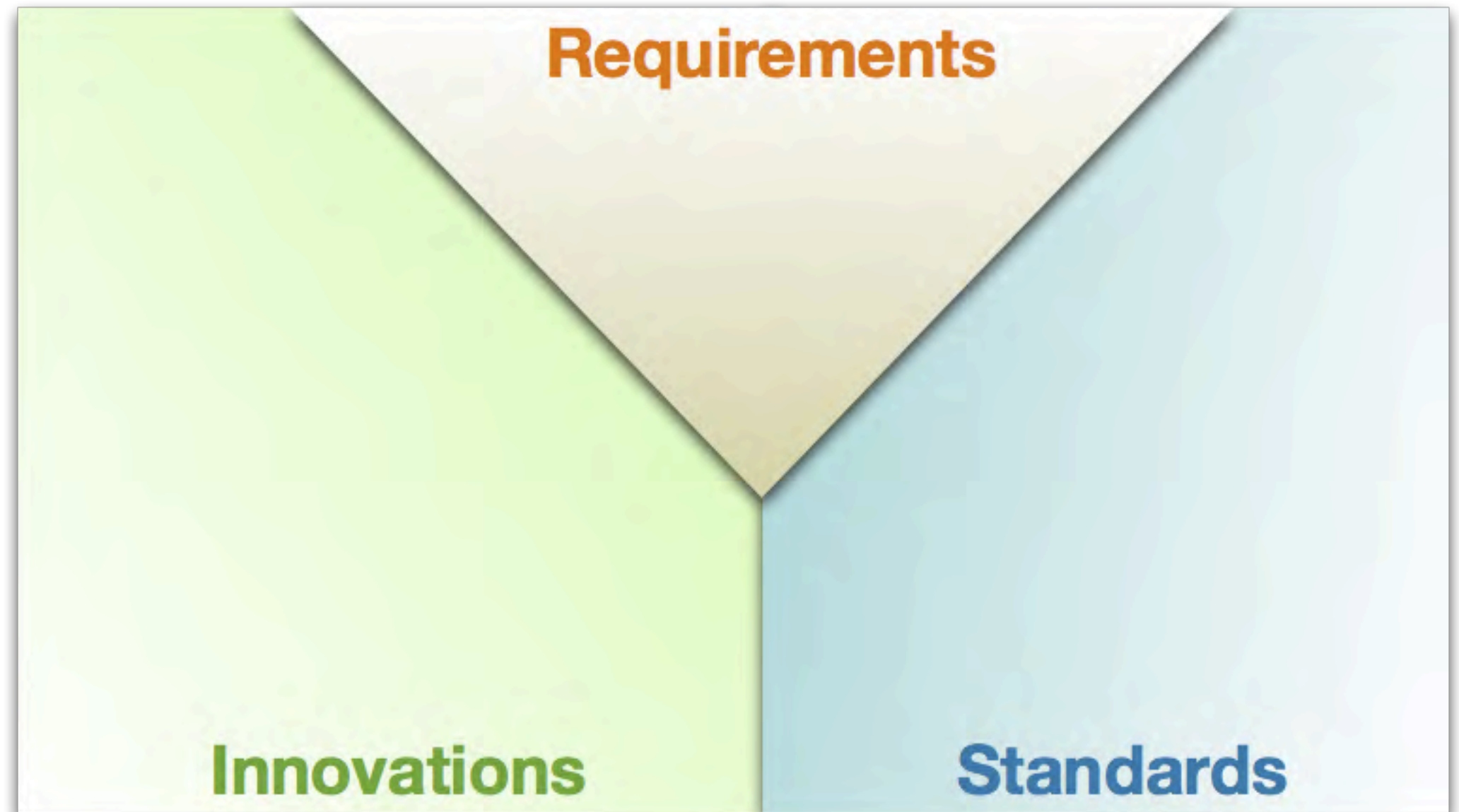
From Cool Ideas...  
...to Cool Products



# Innovation Process

## From Cool Ideas to Cool Products

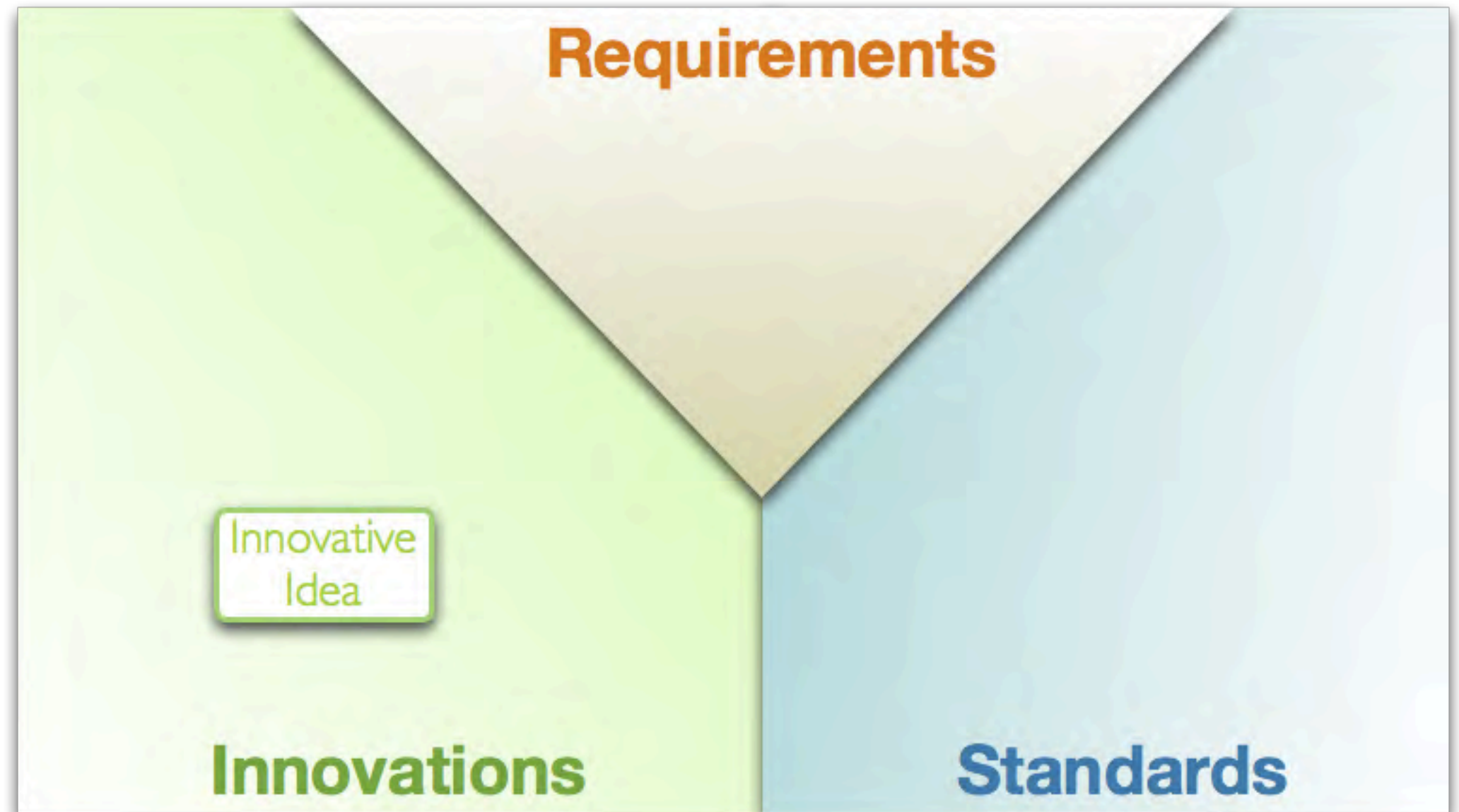
- ▶ Create a captive environment for new ideas
- ▶ Prototype and validate new ideas with lead users
- ▶ Standardize and Productize Innovation



# Innovation Process

## From Cool Ideas to Cool Products

- ▶ Create a captive environment for new ideas
- ▶ Prototype and validate new ideas with lead users
- ▶ Standardize and Productize Innovation

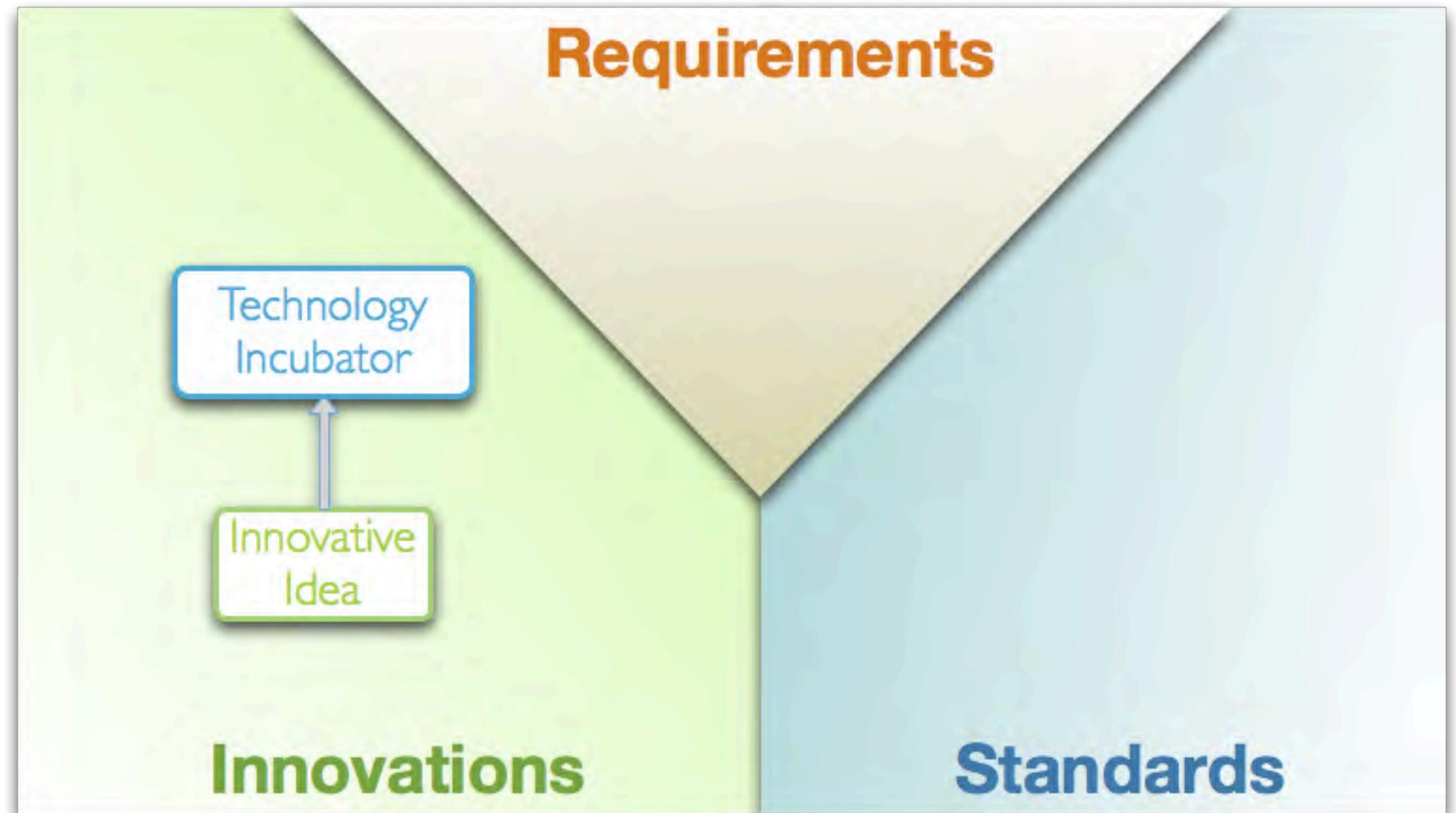




# Innovation Process

## From Cool Ideas to Cool Products

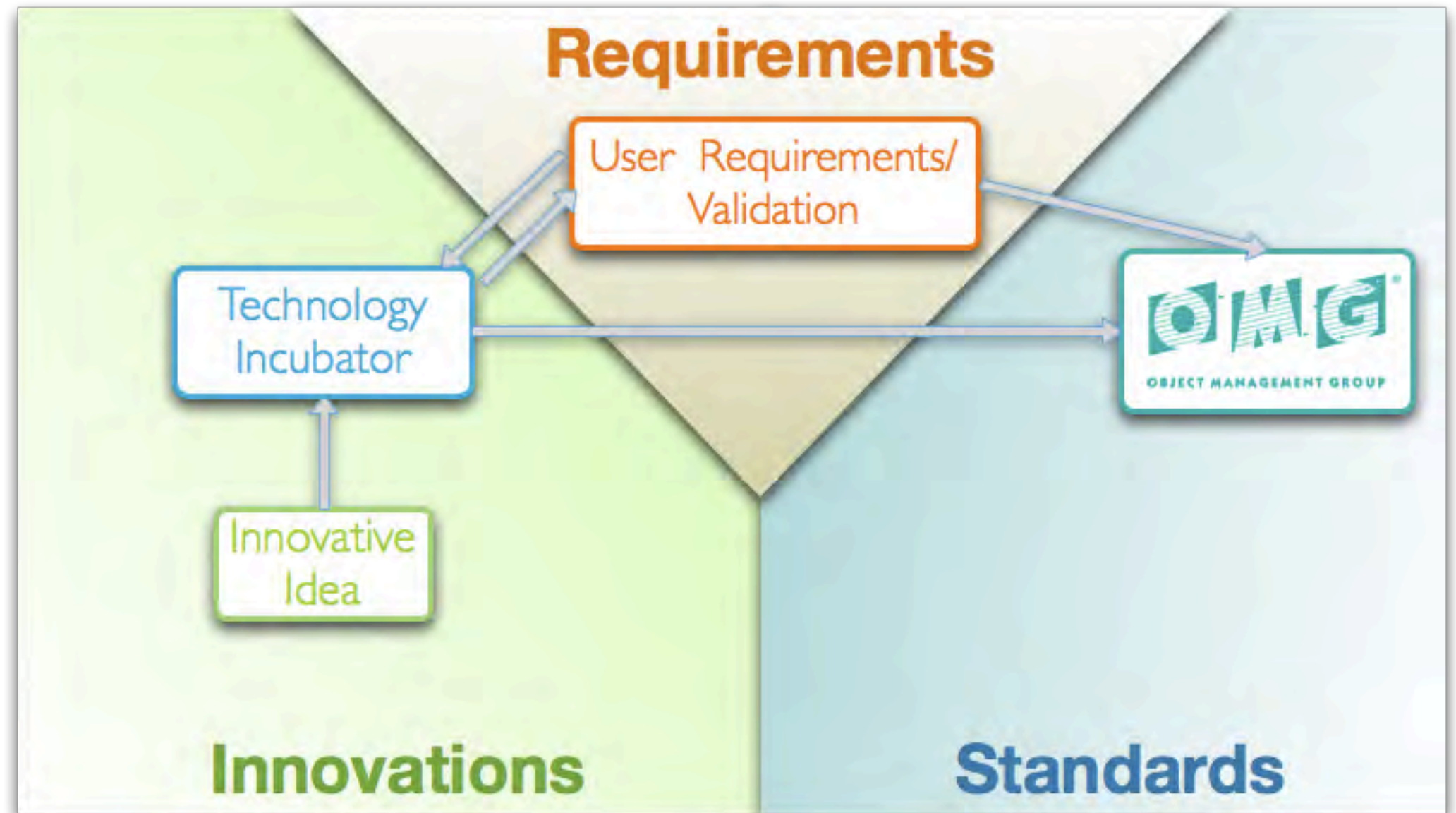
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# Innovation Process

## From Cool Ideas to Cool Products

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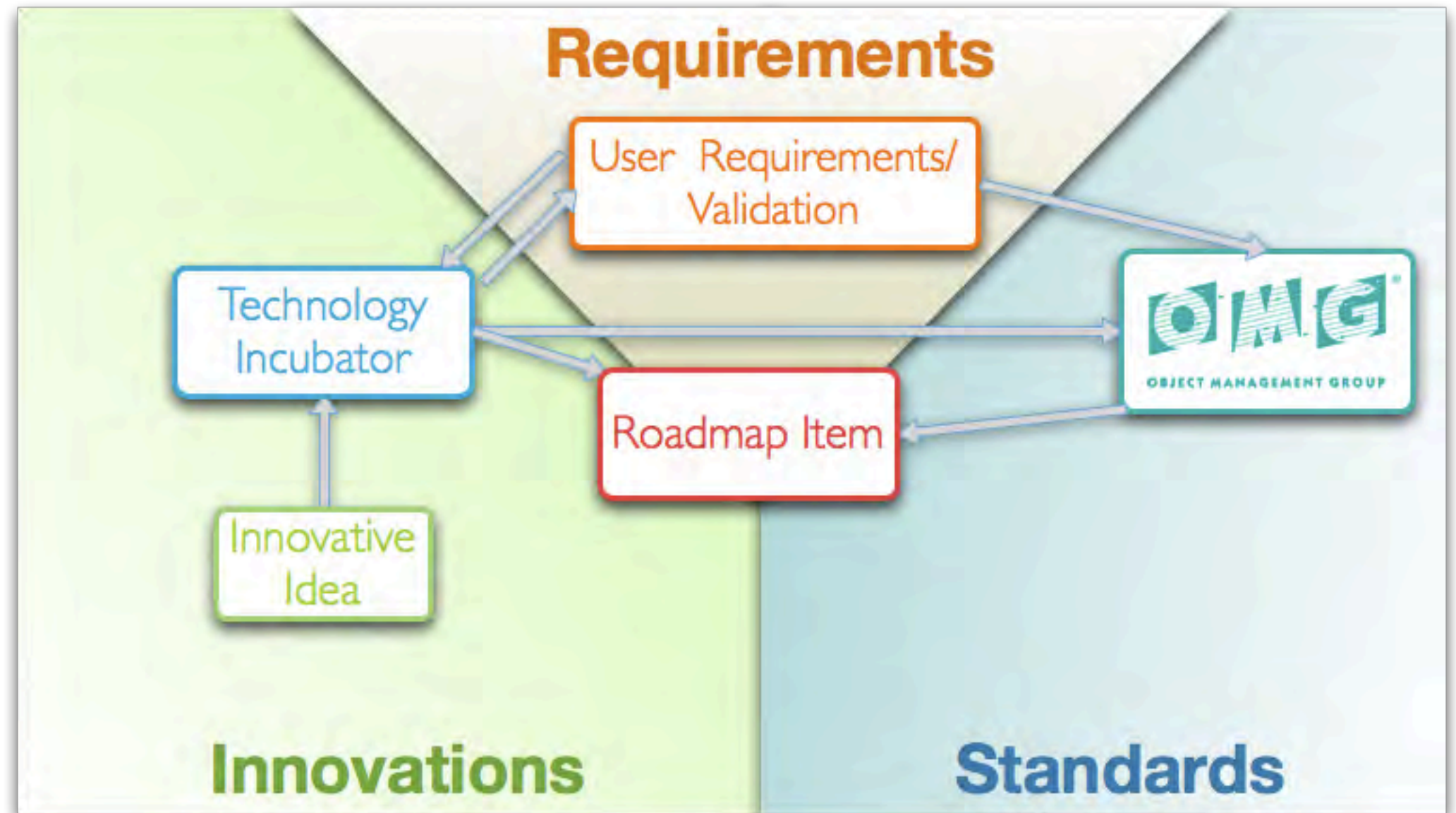




# Innovation Process

## From Cool Ideas to Cool Products

- ▶ Create a captive environment for new ideas
- ▶ Prototype and validate new ideas with lead users
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# OpenSplice|DDS

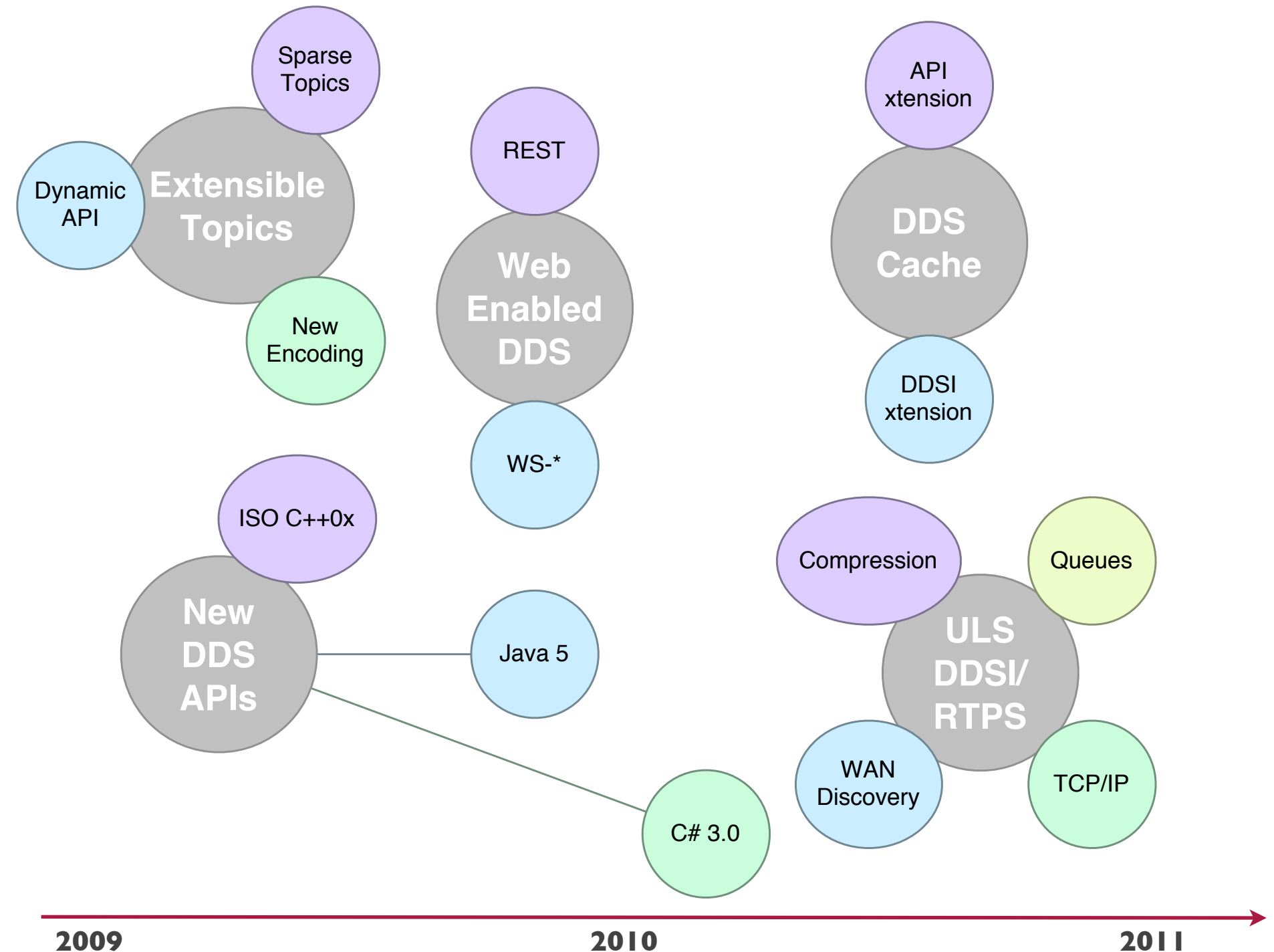
Delivering Performance, Openness, and Freedom

What's Next?



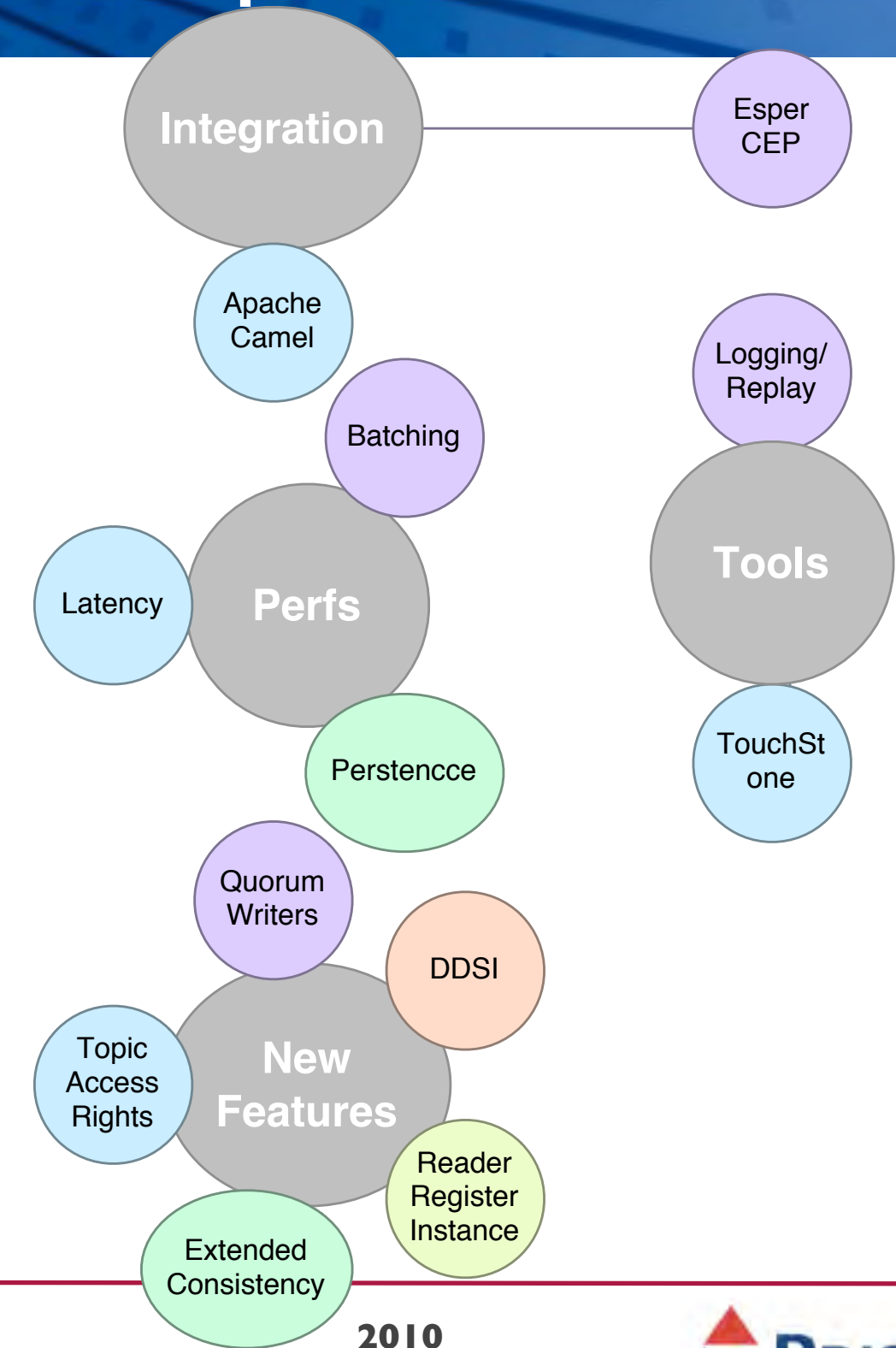
# Standardization Activities

- ▶ 2009 was a very intense year from a DDS standardization perspective
- ▶ 2010 won't be less intensive than 2009 considering the upcoming areas of standardization



# Coming Next with OpenSplice DDS

Aside from standard extensions, the OpenSplice DDS Team is working toward delivering a set of very interesting new features





# OpenSplice|DDS

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Joining the Club

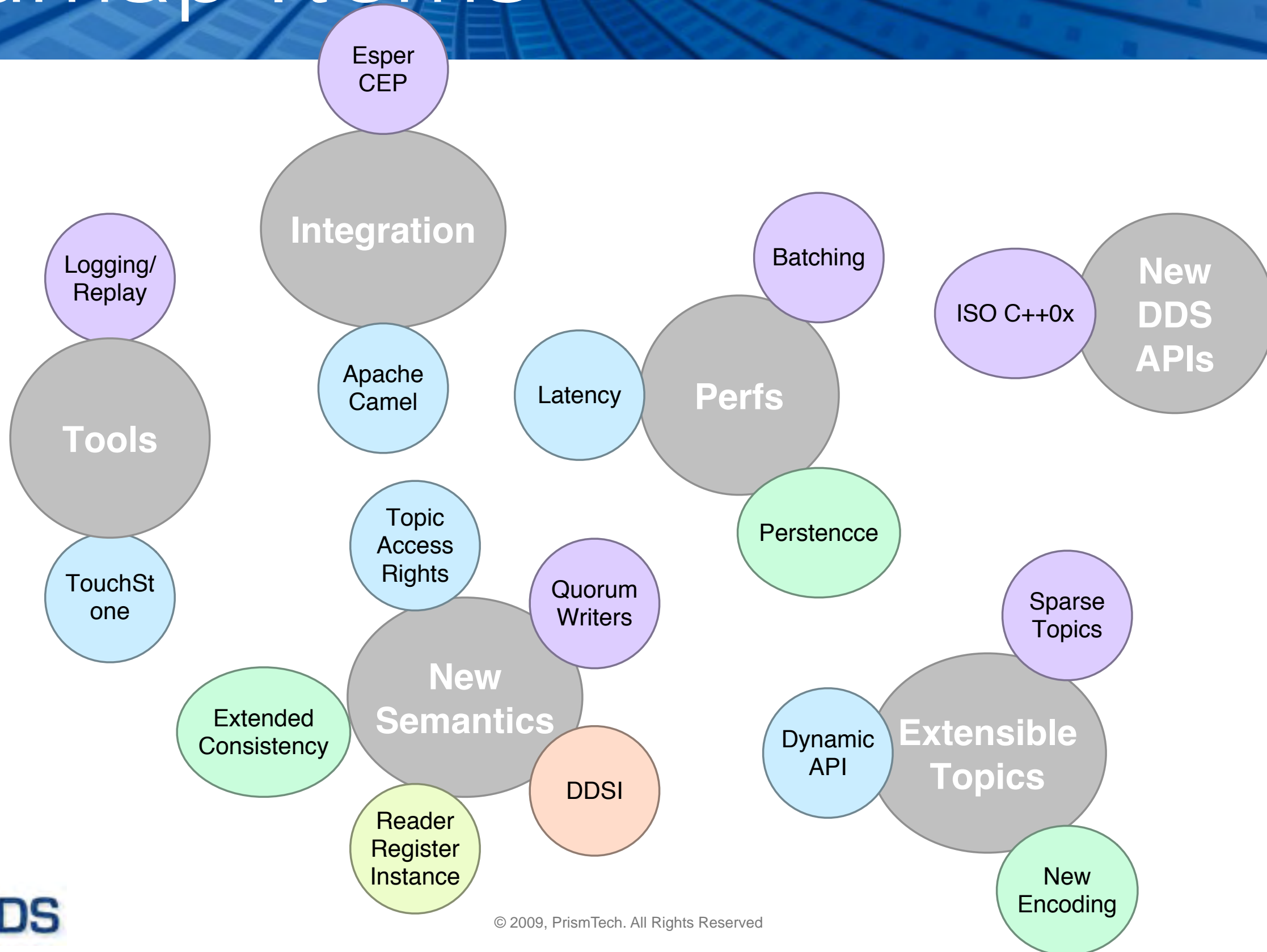
# How To Contribute

There are two ways in which you can contribute

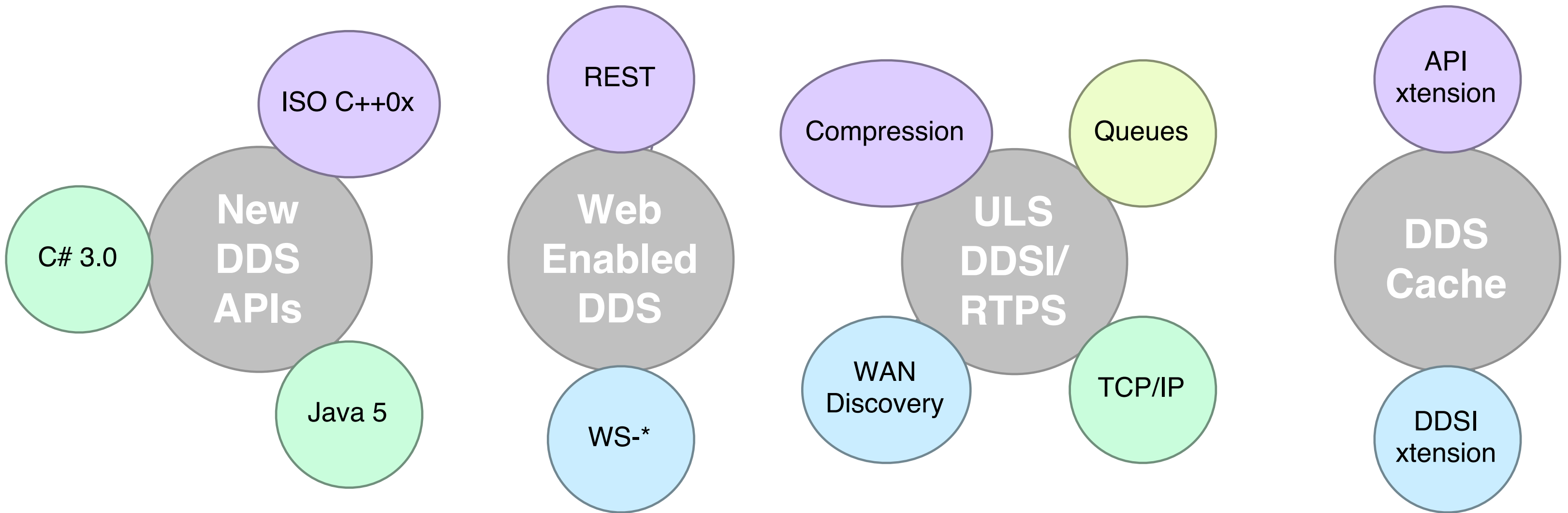
- ▶ Join Forces with PrismTech to accelerate the development of Roadmap Items
  - ▶ Fund developments of new items
  - ▶ Join our developer team
- ▶ Join or Take leadership for a Technology Incubator
  - ▶ Join and contribute an existing Incubator
  - ▶ Take leadership over one of the Incubators (or propose another)



# Roadmap Items



# Technology Incubators



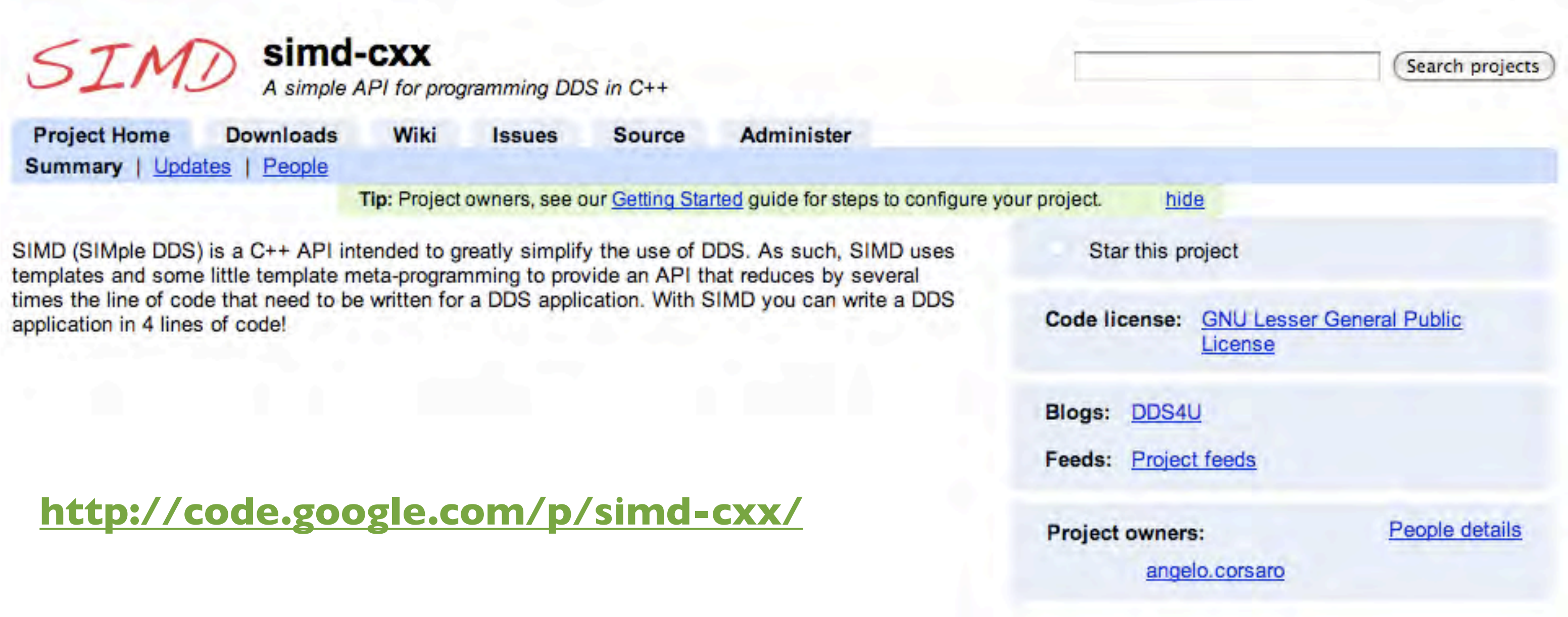


# OpenSplice|DDS

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An Example...

# SIMD Project



The screenshot shows the Google Code project page for SIMD-cxx. At the top left is the 'SIMD' logo in red script, followed by 'simd-cxx' in bold black text and the tagline 'A simple API for programming DDS in C++'. To the right is a search bar with the text 'Search projects'. Below this is a navigation bar with links: 'Project Home', 'Downloads', 'Wiki', 'Issues', 'Source', and 'Administer'. Under 'Project Home' are links for 'Summary', 'Updates', and 'People'. A green tip box states: 'Tip: Project owners, see our [Getting Started](#) guide for steps to configure your project. [hide](#)'. The main text describes SIMD as a C++ API that simplifies DDS programming by reducing code lines. On the right sidebar, there are links to 'Star this project', 'Code license: [GNU Lesser General Public License](#)', 'Blogs: [DDS4U](#)', 'Feeds: [Project feeds](#)', and 'Project owners: [angelo.corsaro](#)' with a 'People details' link.

**SIMD** **simd-cxx**  
*A simple API for programming DDS in C++*

[Project Home](#) [Downloads](#) [Wiki](#) [Issues](#) [Source](#) [Administer](#)

[Summary](#) | [Updates](#) | [People](#)

Tip: Project owners, see our [Getting Started](#) guide for steps to configure your project. [hide](#)

SIMD (SIMple DDS) is a C++ API intended to greatly simplify the use of DDS. As such, SIMD uses templates and some little template meta-programming to provide an API that reduces by several times the line of code that need to be written for a DDS application. With SIMD you can write a DDS application in 4 lines of code!

[Star this project](#)

**Code license:** [GNU Lesser General Public License](#)

**Blogs:** [DDS4U](#)

**Feeds:** [Project feeds](#)

**Project owners:** [angelo.corsaro](#) [People details](#)

<http://code.google.com/p/simd-cxx/>



# Hello-pub.cpp (Default QoS)

```
int main(int argc, char* argv[]) {  
    if (!parse_args(argc, argv))  
        return 1;
```

```
// -- init the SIMD runtime
```

```
simd::Runtime::init();
```

```
// -- create the DDS Topic
```

```
simd::Topic<swatch::hello> helloTopic("helloTopic");
```

```
// -- create the DDS DataWriter
```

```
simd::DataWriter<swatch::hello> writer(helloTopic);
```

**Only 3-lines of DDS-Specific Code**

```
swatch::hello sample;  
std::stringstream ss;
```

```
for (int i = 0; i < N; ++i) {
```

```
    ss << i;
```

```
    std::string tmp = ss.str() + "." + message;
```

```
    ss.str("");
```

```
    sample.name = DDS::string_dup(tmp.c_str());
```

```
    std::cout << "<=<=" << sample.name << std::endl;
```

```
    writer.write(sample);
```

```
    usleep(period*1000);
```

```
}
```

```
std::cout << "[done]" << std::endl;
```

```
return 0; }
```

**Business Logic**

# Hello-sub.cpp (Default QoS)

```
int main(int argc, char* argv[]) {  
    if (!parse_args(argc, argv))  
        return 1;
```

```
// -- init the SIMD runtime  
dds::Runtime::init();  
  
// -- create the DDS Topic  
dds::Topic<swatch::hello> helloTopic("helloTopic");  
  
// -- create the DDS DataReader  
dds::DataReader<swatch::hello> reader(helloTopic);
```

**Only 3-lines of DDS-Specific Code**

```
swatch::helloSeq samples;  
DDS::SampleInfoSeq infos;  
  
while (true) {  
    reader.read(samples, infos);  
    for (int i = 0; i < samples.length(); ++i) {  
        std::cout << "=>> " << samples[i].name  
                    << std::endl;  
    }  
    if (samples.length() > 0)  
        std::cout << "--" << std::endl;  
    reader.return_loan(samples, infos);  
    usleep(period*1000);  
}  
return 0;}
```

**Business Logic**



# OpenSplice|DDS

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Summing Up

# Why Joining?

## For Individuals

- ▶ Get exposure to one of the most sophisticated Data Distribution Technology available
- ▶ Improve and extend your DDS skill-set and leverage this on your next career move
- ▶ Have fun hacking the core of a high performance communication middleware

## For Companies

- ▶ Work on extensions that are relevant to you business domain
- ▶ Leverage the community effect to get shorter time-to-market and more innovation
- ▶ Build an OpenSplice DDS center of excellence within your organization



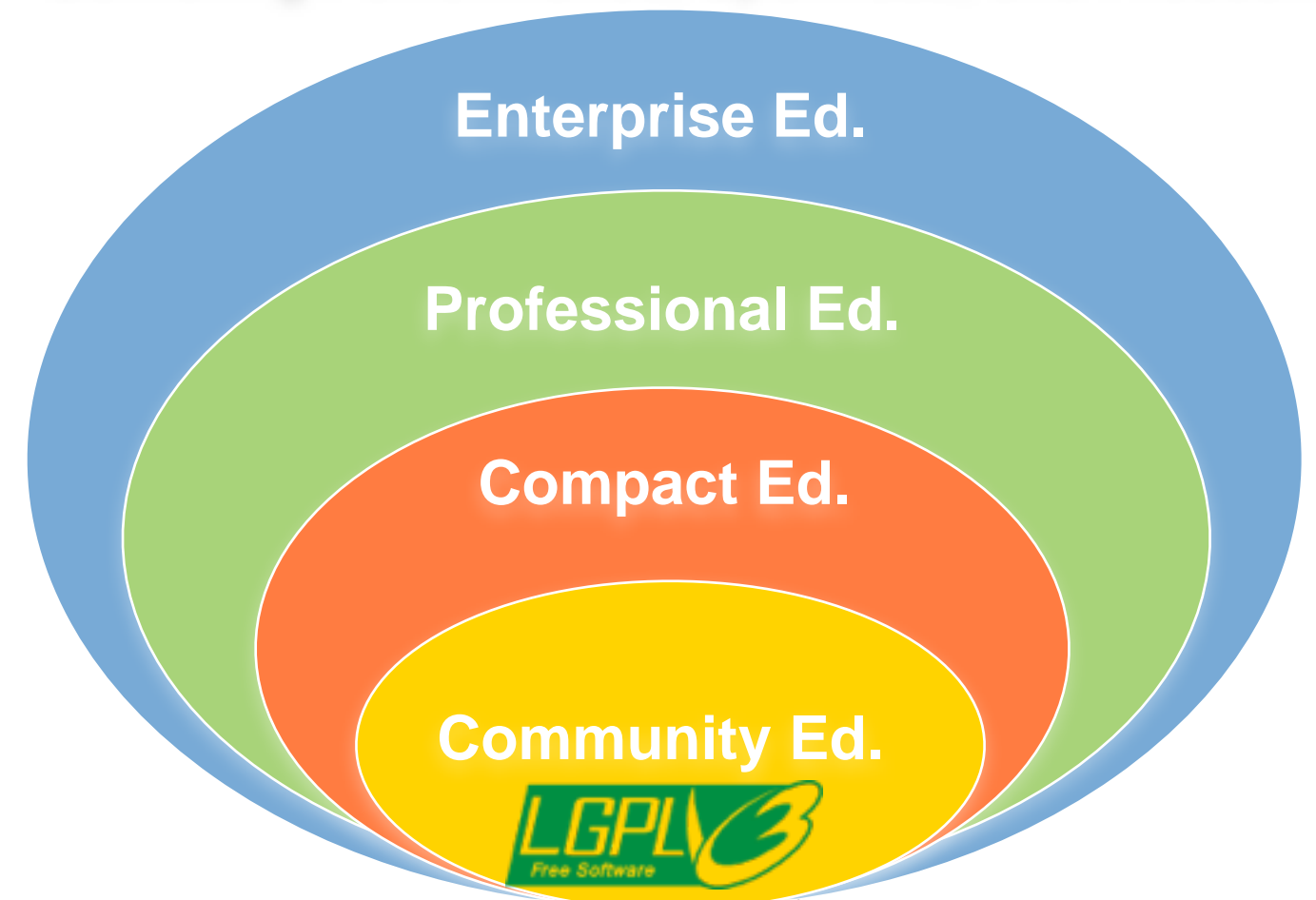


# Concluding Remarks

- ▶ OpenSplice DDS is now available as Open Source Software under LGPL Licensing
- ▶ This release provide users with access to the most powerful extreme performance data distribution technology available on the market
- ▶ A set of added value Editions along with a very rich set of Services is available through PrismTech
- ▶ There is already an agenda full of cool items to work-on for the swiftly growing OpenSplice DDS community

**Pick your incubator project and contribute to the OpenSplice DDS World domination!**

**OpenSplice|DDS**  
Delivering Performance, Openness, and Freedom



# Online Resources

**OpenSplice|DDS**

Delivering Performance, Openness, and Freedom

\* <http://www.opensplice.com/>

\* [emailto:opensplicedds@prismtech.com](mailto:opensplicedds@prismtech.com)



\* <http://www.slideshare.net/angelo.corsaro>



\* <http://bit.ly/1Sreg>



\* <http://twitter.com/acorsaro/>



\* <http://www.youtube.com/OpenSpliceTube>



\* <http://opensplice.blogspot.com>