SKI
TECHNICAL ARCHITECTURE

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FrontierSI (former CRCSI)
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Spatial Infrastructures program (ANZSI) aims at building an infrastructure, which will, for example:

- assist people as they select a place to live,
- inform planners as they design new suburbs,
- aid emergency services personnel as they respond to life threatening situations and
- safely guide autonomous vehicles as they navigate our streets.

What can we do with current SDIs?
Q: Where is the closest POI?

• Call a friend and ask them which SDI catalogue to use?
• Search in the catalogue,
• Study what’s available,
• Access and use data,
OR
• Go to provider’s website, register, access data,
• Download and use data

There should be better ways to do this today!
Direct your apps to SKI!

**Spatial Knowledge Infrastructure**

“a network of data analytics, expertise and policies that assist people, whether individually or in collaboration, to integrate in real-time spatial knowledge into everyday decision-making and problem solving.”
all sorts of smart applications – e.g. conflation service, federation service, smart search, smart flood models, smart processes on smarter than OWS resources)

**SKI**

Knowledge On-demand Services

Main components of SKI

**SKI Broker**
- Mediator between resources and application;
- Analyses and processes user queries;
- Explores curated resources in SKI Spatial Metadata Catalogue;
- Redirects requests to resources;
- Retrieves, assembles and returns response to the app;

**SKI Spatial Metadata Catalogue**
- Stores information about spatial resources, i.e. Metadata
How apps use SKI in ideal world?

Where is the closest POI?
- dunnno...let's ask SKI..
- Here's your map!

OK, let's find them on the web
- Where are POI resources?
- Are resources fit for purpose?
- Got it!

Let's send them back then..
...all yours!
But we are not quite in the ideal world as yet, are we?

How could apps use SKI already?
Where is the closest POI? 

"dunno... Let's ask SKI.."

Here's your map!

OK, let's find them on the web

Knowledge on Demand

Let's send them back then..

Here is the URI list.

Let me upgrade and register you for my future use...

Who should be smart?

The app?
Who should be smart?

The SKI?
Let SKI governance decide...
But what to do with SDIs?

Expose them to the web: produce LINKED METADATA
Expose metadata to the web
...and ‘teach’ your stakeholders to expose their resources to the web
Thank you!

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