Where is Waldo?

The enterprise world is a challenging one, as systems are becoming more and more complex, the infrastructure is increasingly diverse, and some systems and applications are on cloud, while others are working on-premise. We are mobile and we need to find things fast to do our job well.

So, what are some things we need to "find" in our enterprise world?

Who is that magic Waldo in the red-and-white hat and striped shirt (this might be considered an "asset")? It might be, where is John and where am I? To delve deeper, where is my pipe? Where is my transmission line? With IoT in mind, there is a growing amount of different "things" which need to be located and maintained. It might also be a something like, where are all my richest clients? Where are all the teens who will need to be employed in a couple of years?

GIS is helping a lot of companies run efficiently, gain time, and improve internal business processes. But are there any "buts"? There are some.

In order to do the job, we need to have a true source of information. First we would like to understand where is the main system of records? Are they in GIS, a business system, ERP, CRM, data warehouse, or an asset management system? Then where is our core data? Companies usually end up with the data scattered between several data sources which needed to be synchronized or replicated. Are there any solutions to this problem?

Synchronization might be an extremely complex task. How do we identify if it is the same physical object that is represented in different systems, and maybe even with different keys? Do we need to create it or are we creating a duplicate? How do we get rid of duplicates or establish the correct business rules that allows us to create or update a record? How do we make sure that a person is authorized to do that? All these questions are running through the minds of anyone involved in implementing such a functionality.

That is why in this topic we will be covering slightly different aspects of the same problem. We will be discussing the different alternatives that allow us to think out of the box and maintain the *"true"* data to where it belongs. One of the alternatives is: *the GIS services implemented in the system other than GIS.* We will discuss how it can be done, what is our experience, the architecture we adopted, as well as other alternatives for companies who are not SAP customers and want to tackle a similar range of problems.

Finally, I would like to emphasize my Waldo. In reality I would like to find my "Waldo" on the map and Waldo should have a white hat with a red stripe, round glasses, and a red-and-white stripe shirt. It has to be the "true" Waldo. The same goes for the object I want to find; it should have the correct business attributes coming from the systems where this information originated from. I hope my presentation will help Esri customers come close to solving this problem.