# Why do we still need a labeled property graph (LPG)?

Labeled property graphs are used in graph analytics frameworks such as Apache Giraph, GraphX on Apache Spark, and TigerGraph, just to name some examples. Graph analytics is typically focused on graph structure properties such as clustering, modularity analysis and centrality analysis of nodes when applied by researches but many applications use a different class of algorithms: routing path search. Path search and graph based routing are both well known and extensively used in real world applications by normal people.

But there are so many other graph algorithms besides path search. Especially in Complex Systems Research the emerging field of structural graph analysis becomes more and more essential. Why is this so important? It is because some nonobvious properties might be revealed by comparison of a variety of structural propeties. Observability of such properties is not given, we have to extract the information by special data analysis methods.

It is important to know, that graph structures, which represent a complex system, differ from widely used knowledge graphs. Many knowledge graphs have been created using RDF. This allows for very efficient data integration not only on a technical level, but rather using the meaning of the information which gets integrated.   
  
The Property Graph captures the system dynamics and exposes hidden properties to the analyst who uses correlation-, clustering-, connectivity-analysis algorithms from it‘s graph analytics toolbox.

