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The purpose of the Journal is to disseminate knowledge, experience, and best practice in engineering & manufacturing.
The articles are written by practicing professionals in the Engineering City (EC). They cover issues relevant to their projects, operations, and organizations.
The articles address the challenges of the time. As such, the Journal is also a chronicle of the evolution of the EC, its companies, and its individuals.
It is the aim of the Journal to advance the engineering & manufacturing practice, to enrich the engineering & manufacturing community, and to contribute to the worldwide discourse in engineering & manufacturing.

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EC Community Corner

. The Evolution of the Whole

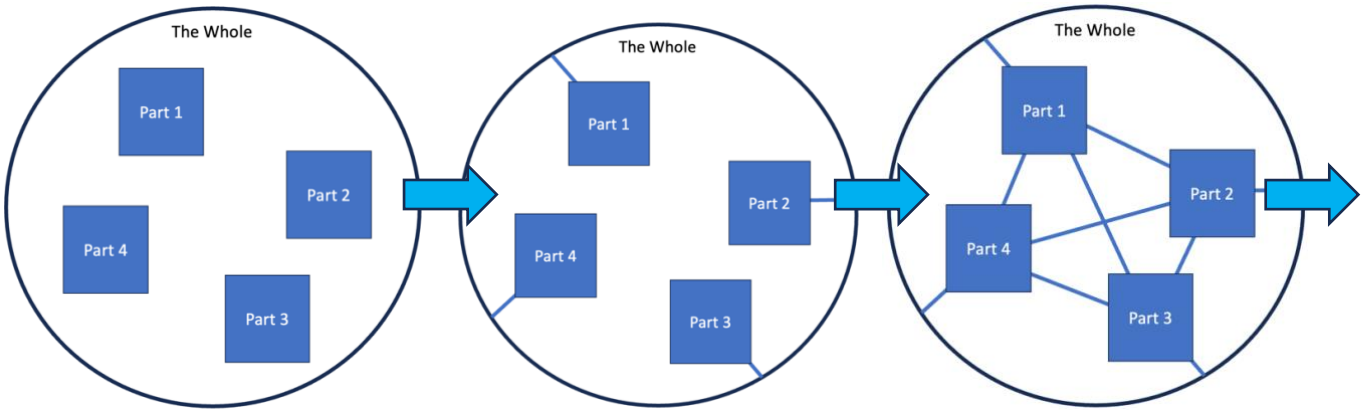
by Rama, Engineering Association

In a previous article (EC Journal 7/2025) we discussed different types of the Whole-Parts relationships.

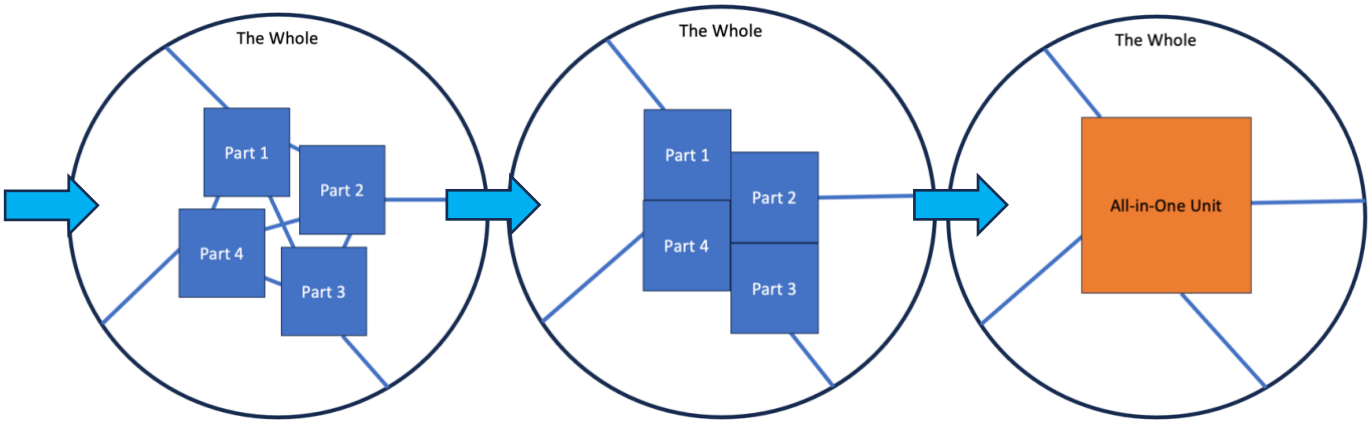
In this article, we will speculate on the possible movement of the Whole from Atomic to Fusion.

We could possibly observe that the Whole moves and evolves through the following phases:

1. Atomic Phase
2. Formal Phase
3. Multiple Relations Phase
4. Structurally Interdependent Phase
5. Efficiency & Effectiveness Phase
6. Fusing Phase



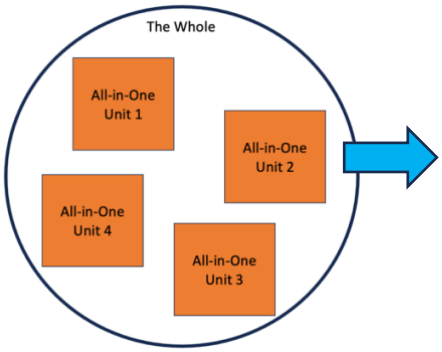
1. Atomic Phase *2. Formal Phase* *3. Structurally Inderdepent Phase*



4. Parts moving towards each other *5. Merging Phase* *6. Fusion Phase*

What starts as isolated parts ends up - after multiple phases - forming a new entity (the All-in-One Unit) that contains all the functionalities of the parts that are in it. Yet this is not a mechanical merger, it is a fusion. This is structurally a complete different Unit with complete different qualities than the individual parts. Here, we end up with a very simply unit from the outside, but a very complex unit from the inside. Now the Whole can communicate with other Wholes as Units.

And now, the process starts again. But now, each part of the new Whole is an All-in-One Unit that had been formed in a previous evolution. If we take the example of the EC Community, then the new round of evolution would contain already multiple ECs – each being a single part in the bigger Whole – the Whole being the set of all Engineering Cities that are in the country. And so on.



Pic. The New Whole, where the parts are still isolated.
Here, the parts of the new Whole are complex units of a previous evolution of a previous Whole.

Now, the above evolution depends on the dynamics of the relations that get established between the parts. In other words, it is the evolution of these inter relations that ultimately forces the whole to evolve from one phase to another.

We could possibly see the following stages of the evolution of these relations:

1. No relations between parts. There is only a quantity of parts.
2. The appearance of single connections between individual parts and other individual parts. This is when the parts get to learn about each other and a certain grouping of similar interests appear.
3. The appearance of multiple connections between individual parts and multiple other parts. This is already a more complicated Whole. This is also a phase where the parts realize that these connections could be evolved and deepened.
4. Structured relations. Here the connections turn into organized processes that need to be managed.
5. Procedural relations. Here the processes already need procedures that need to be controlled.
6. System relations. Here the parts get to consciously understand their place in the whole through the multiple advanced relationships between the parts and the whole. Each part now can fully represent the Whole.

What do you think. Do you agree with this article?

History Corner

. Children of the Genocide – to Remember and to Remind

by Rama, EA

I buy my boy color pens so that he can paint; I buy my boy little cars so that he can play; I put my boy in kindergarden so that he has friends; I create my boy the environment so that he is happy. The picture of the world that is getting impressed on my boy is a happy world, and so far he is enjoying every bit of it.



But what about the children of the genocide? What picture of the world was impressed on the minds of these children? What picture of the world was impressed on these children when they saw the cries, the tortures, the killings of their parents at this early age? What picture was impressed on these children when they cried for food, water, shelter and could not get them? Did they wonder why they were brought into such a world?



Children of the Genocide.
What image of the world gets impressed on them?

Our grandparents ended up in Aleppo as orphans not unlike the children in this picture. They grew up to become very hard working and peaceful people. The only revenge that they could think of was to stubbornly stay Armenians, to keep the memory of what has happened, and to remind us that this could happen again if we don't keep vigil. And this is how we grew up.

Yet, the main issue for humanity is not as much whether genocides have been recognized or not – although this would be the first step. The main issue for humanity is that the reasons why genocides happen have not been eradicated. Therefore, humanity is still witnessing and will still be witnessing multiple genocides to come. Humans, despite all the

progress in science and technology, have not inched one inch forward in this regard. We sometime believe that progress is all about science and technology. But what about progress in humanity?





Children of Genocide.
What image of the world gets impressed on them at this early age?

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