Education, a Corner Stone for Digital Twin

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SUMMARY

Digital twin was first developed as a concept around the year 2002 at Michigan State University. The concept of creating a virtual environment identical to the physical environment is something that has developed over time. A digital twin can be seen as an instrument that combines and integrates static and dynamic data with each other. The dynamic data can come from active and involved participants, as such being citizen science. There are initiatives in the Netherlands where collected data by citizens becomes an important enrichment of the digital twin.

Within the digital twin, multiple users with multiple perspectives can acquire the data and insight they need for their specific cases. Where digital twins in the past were mainly used to serve one function or group, now a trend is visible of combining digital twins which offer multiple perspectives. Moreover, some nations are nowadays working towards a national digital twin.

Next to the evolving concept, the amount of dynamic and static data in digital twins is increasing. A future generation will grow up with already established digital twins. Engagement, data collection and their sharing are qualities and skills that are missing in education of today. It seems that citizens science is a perfect concept that can be introduced in the early education program. To take full advantage of the digital twin concept there is a need to adapt a school program where children can also learn about geo-tools, citizens participation and data collections. When covid accelerated hybrid and digital learning, new opportunities arose to make this a reality.

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