Vision:
Learning Journey of Two Young Kids in a Remote Village

Author: Guy, Huntington, President, Huntington Ventures Ltd.
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Vision Story

Sheena and Rohit are two four-year old's living in a remote village which doesn't have electricity or internet connectivity. There is a one room schoolhouse in the village.

One day some learning aid people appear to talk with the village elders. They study the area and propose bringing in some technology which will give the village a renewable source of electricity and internet connectivity. The elders agree. A few months later, the village now has electricity and internet access.

A remote learning specialist then appears. They bring with them a physical bot which is used for learning assessment. Both Sheena and Rohit work with the bot and the learning specialist.

The bot takes in all sorts of different information, assessing their eyesight, sound, smell, hand-eye coordination abilities, their ability to communicate with others, ability to learn, eye blinks per second, where they look, etc. For each child, the bot then produces a DLT (Digital Learning Twin), as well as an IEP (Individualized Education Plan).

The bot and the learning specialist realize:

- Sheena is very gifted in mathematics
- Rohit is on the ADHD spectrum

Thus, they create very different IEP's for each child.

The learning specialist brings with them a learning assistant bot. This is a physical bot able to work with kids of various learning styles and abilities. They also bring in some AI/AR/VR plus laptop technology. Both the bot and the tech have been specially designed for remote locations.

In the early days, there's only one learning assistant bot per village, and a limited number of AI/AR/VR and laptop tech. So, the teacher is taught how to use the learning assistant bot and the tech by the learning specialist, as well as other learning specialists online, using the AI/AR/VR environment.

Sheena, at age four, is given a few hours a week, individualized learning, leveraging the laptop and AI/AR/VR environments allowing her mathematical abilities to flourish.

The DLT/IEP realize Rohit learns best by physically doing things. Through a co-design process, there's now a variety of different interfaces for Rohit to learn, tailored to Rohit and his learning style. Thus, Rohit is also given specialized learning, leveraging a few hours a week with the learning assistant as well as the AI/AR/VR environments. Rohit can physically/digitally do things in this environment.

In the AI/AR/VR environments they're introduced to Sally Goodteacher, a remote learning teacher located somewhere else on the planet. She's assisted in the environment by PattyBot and BobBot, two virtual teaching assistants.

One day, some criminals with guns appear in the village, taking all the tech. They want to use it themselves. However, when they go to their base, they find out the tech doesn't work. It's tied to the physical location of the remote school as well as to each learner.

A few months later, the same criminals return to the village which now has a replacement set of technology. They dump the tech in the village outhouse. Once the criminals leave, the villagers take the tech out of the urine and shit, clean it up, and it works! The tech has been designed for just this disaster scenario.

As the years pass, Sheena can do university level maths while still in primary/secondary age groups. She goes on to attending university, initially from the village, and then physically going to it. She's also made a friend with one of the online students in the AI/AR/VR environments, Eve. They become lifelong friends.

Rohit has learnt he likes growing things. The DLT/IEP, plus the learning specialist and his physical teacher in the village, work with Rohit to learn biology, agriculture, genetics, applying this to growing things. With global warming affecting their local crops, Rohit becomes a leader in the village with respect to selecting genetically modified crops able to withstand the increase in temperature and different growing seasons.

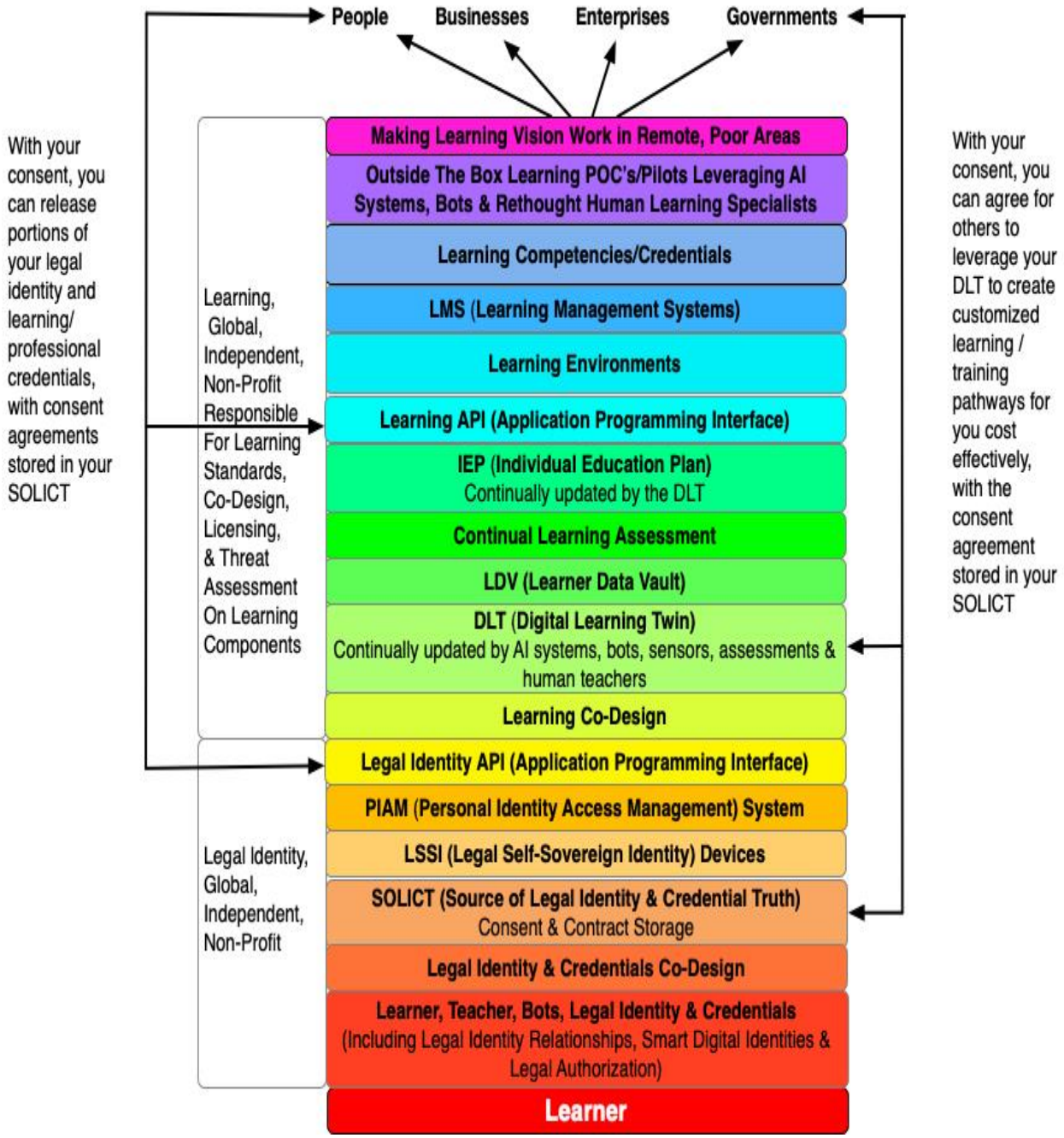
As the price points drop for the technology used in the village, more learning assistant bot and AI/AR/VR tech appears. Adults too can now have a learning assessment done on them. Rohit's mother, Aanya, wants to go back to school to learn. She does so leveraging the same learning infrastructure her son used. Over time, she becomes an engineer.

It's transformational, over time, not overnight. The village plugs into the global learning revolution. It changes their economy, how they live, and their view of the planet on which they live. They're not left behind.

Is All This Possible Today?

Honest answer - sort of. The tech is just emerging to allow us to think about applying it to remote areas.

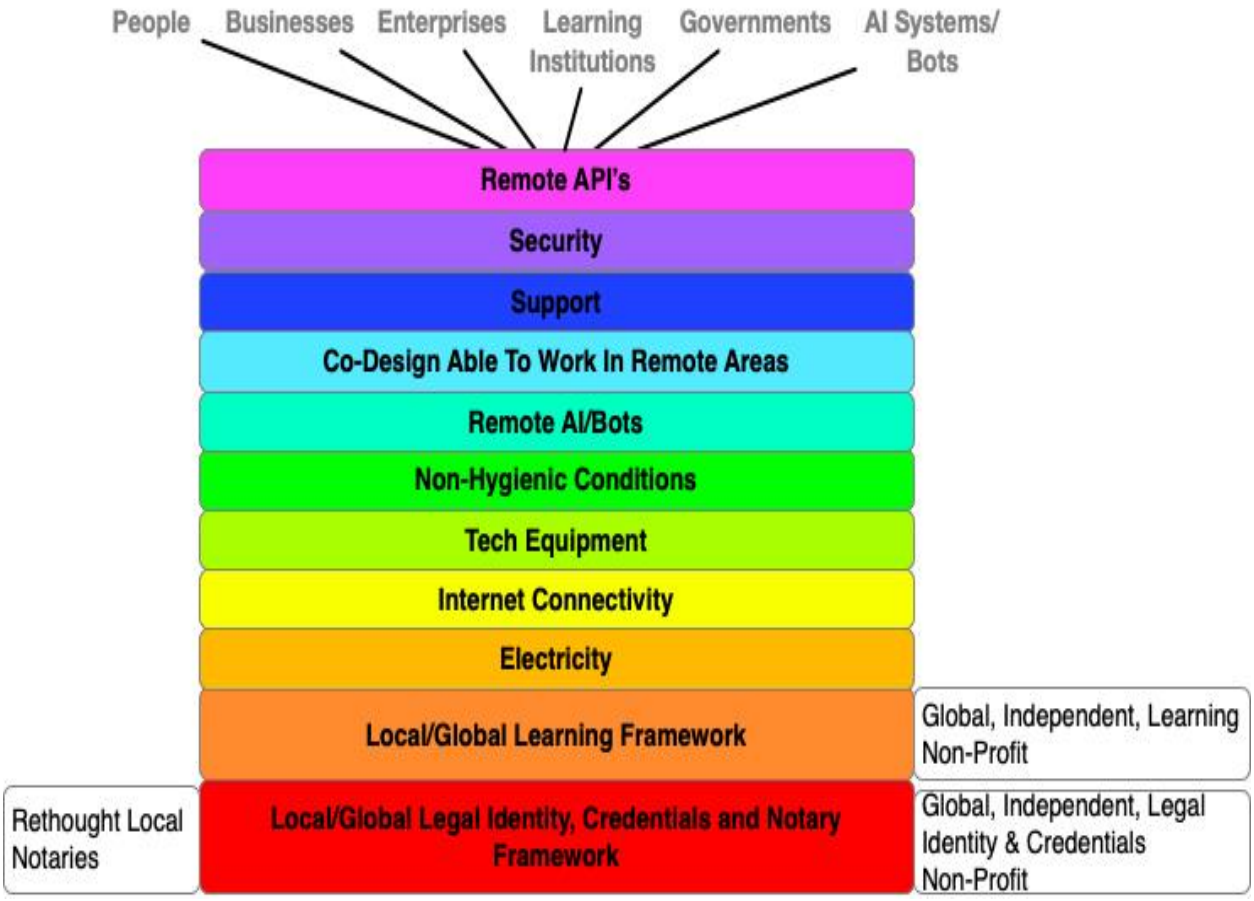
First, look at this diagram. It's the legal identity and learning vision architecture required to make all the magic work:



A high-level review can be found in "**Learning Vision Flyover**".

Cost Centres for the above can be found in pages 364-501 of "**Cost Centres – Rethought Legal Identity & Learning Vision**".

Then look at this diagram. It identifies the different cost centres required to make the learning vision happen in remote areas:



Skim pages 441-456 in "**Cost Centres – Rethought Legal Identity & Learning Vision**". It describes existing programs and initiatives around the planet.

Electricity/Internet Connectivity

Skim pages 444-445 in "**Cost Centres – Rethought Legal Identity & Learning Vision**". It describes existing programs and initiatives around the planet.

Remote Internet Connectivity

Skim pages 446-447 in "**Cost Centres – Rethought Legal Identity & Learning Vision**".. It describes existing programs and initiatives around the planet.

Remote Tech Equipment

Throughout the rethought learning cost centre, it refers to leveraging emerging tech such as AI/AR/VR et al to then rethink assessments, take the data into a DLT, create customized IEP's for each child, and then continually refine the IEP's leveraging assessments, biometric/behavioral data, et al. My dumb question to funders who want to do this in poor, remote locations on the planet is, "How will we make this work in challenging operating conditions?"

As mentioned in the **Remote AI/Bots Cost Centre**s section, the devices will have to perform in a wide range of different operating conditions. Further, it's also highly likely criminals will want to take the tech for themselves by forcibly stealing it.

Then there's the price points of the tech to consider i.e., we're piloting this in very poor parts of the planet. Finally, there's the support to consider i.e.., the local support centre might be a VERY LONG WAYS AWAY. Add it all up, and it's another significant challenge, which is why I've made it a separate cost centre.

As stated in the other remote pilot cost sections, rather than trying to solve all the planet's remote tech challenges, I suggest the design requirements come out of the 1-3 pilots we're going to first do. See what didn't work, what worked, learn from it and then rapidly apply it to sites with similar operating characteristics.

Skim pages 448-449 in "**Cost Centres – Rethought Legal Identity & Learning Vision**".

Remote Non-Hygienic Conditions

I've been in many poor villages around the planet. Many of them aren't hygienic. It's not inconceivable that bots and tech equipment can be dropped into pools of urine, shit, mud, etc. Thus, this reality must be addressed to in any rethought learning pilots in remote, poor locations.

I'M NOT AN EXPERT IN THIS. Thus, what follows is simply my best guess at a cost-centre. It's likely experts who work constantly in such remote locations will amend what follows. My strategy, as repeatedly stated throughout the remote cost section, is to let the 1-3 pilots drive requirements for devices etc.

I've broken this out as a separate section, since there should likely be resources assigned to just focus on this. I can see lessons learnt people on the team, documenting what didn't work, what worked and then, based on this, adjusting future roll-our strategies.

Skim page 450 in "**Cost Centres – Rethought Legal Identity & Learning Vision**".

Remote Bots

It's one thing to talk of leveraging bots in urban areas to do learning assessments, teaching assistant, and learning assistance, but it's completely another challenge when one think of using this in remote parts of the planet. As per sone of the other cost centres in this section, there are major challenges with electricity, connectivity, non-hygienic conditions, security, sensor input devices (e.g., AI/AR/VR, etc.) and support challenges. Depending on where the pilot sites are located there also may be extremely dry, cold, wet, sand, etc. conditions to also deal with.

Then there's the security issues to also consider. In my head, I can see a criminal gang walking into the pilot village and forcibly taking the bots with them to use as and where they see fit. This is yet another design challenge most people likely aren't even thinking of.

Add it all up, and therefore I've created this as a separate cost centre. There's lots of problems to solve which likely require significant investment of very skilled resources and research to drive a successful design and implementation into place.

Skim pages 451-452 in "**Cost Centres – Rethought Legal Identity & Learning Vision**".

Co-Design Able To Work in Remote Areas

Because of remote locations, it's highly likely there will be unexpected challenges with learners having different learning abilities and disabilities. This cost centre focusses on this.

Skim page 453 in "Cost Centres – Rethought Legal Identity & Learning Vision".

Remote Support

Remote locations bring with it additional challenges in providing support. The location might be a very long way from support centres, the communication might not always be reliable, etc. Thus, different ways of providing support must be considered in the design, implementation, and maintenance phases of the pilots. That's why I've created this as a separate cost centre.

Skim page 454 in "Cost Centres – Rethought Legal Identity & Learning Vision".

Remote Security

As stated in the story section of this document, there are additional security concerns. Remote locations often have remote security challenges with criminals, etc. forcibly operating and taking away things they want to use. Add to this, criminals wanting to hack into the rethought learning infrastructure to either use the connectivity et al for their own purposes or, to obtain villagers ID's et al to then masquerade as them. Yes, it's complicated, which is why I've created this as a separate cost centre.

Skim page 455 in "Cost Centres – Rethought Legal Identity & Learning Vision".

Remote API's

Dependent upon location, connectivity, and tech used, it may or may not affect the way that APIs are used. Thus, I created this cost centre to potentially focus on this as conditions arise.

Skim page 456 in "Cost Centres – Rethought Legal Identity & Learning Vision".

Summary – Leave No Learner Behind

As the learning revolution hits our planetary shores, if we're going to leave no child learner behind, it requires out of the box thinking for out of the box times. That's what this vision paper begins to describe.

As stated within the cost centre document, the strategy is to not go out and tell the planet what a wonderful idea this is. Instead, **it requires out of the box, innovative country to fund.**

Often in vision type projects unexpected problems occur i.e., shit happens. Thus, I'm also looking for funders who've been through similar situations. I want to develop flat communication structures throughout all the teams, jurisdictional leaders, and funders, to calmly react to the problems, handle them, learn from it, and adapt the program/projects to succeed.

Finally, to achieve this new learning vision in remote and poor parts of the planet won't be easy. Thus, I'm also looking for industry innovators, polytechs, universities, et al to partner up with. Solving the many different challenges requires out of the box thinkers, with resources to deal with it.

I'll end by stating three of my favorite quotes which drive me on

- "**We cannot solve our problems with the same thinking we used when we created them**" – Albert Einstein
- "**Change is hard at first, messy in the middle and gorgeous at the end**." – Robin Sharma
- "**Change is the law of life. And those who look only to the past or present are certain to miss the future**" – John F. Kennedy

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Links to Other Documents

Documents Aimed At Leaders:

- **"Why Should Your Government Fund The Architectures?"**
- "National Security – Reduce Risk By Instantly Determining Entity Friend From Foe"
- "Give Your Industry A Significant Competitive Edge"
- An Identity Day in the Life of Jane Doe" to see an example of a day in the life of your citizens leveraging the new architecture
- "Sir Ken Robinson - You Nailed It!" to understand how it will transform learning
- "National Security, Co-Design & People With Disabilities."
- "Why Should You Read The 500 Page Cost Centre Document?"

Documents About Learning:

- "Transformational Learning Vision"
- "We Have an Identity Problem - AI/Bots in School, Home & Work"
- "Sir Ken Robinson – You Nailed It!"

Costs To Design and Implement:

- Guesstimate Cost Notes Rethinking Legal Identity & Leveraging This to Rethink Learning (PDF)
- Guesstimate Costs Rethinking Legal Identity & Leveraging This to Rethink Learning (Excel Spreadsheet)

About the Author:

Guy Huntington is a veteran identity architect, program and project manager who's lead as well as rescued many large identity projects with many of them involving identity federation. His past clients include Boeing, Capital One, Kaiser Permanente, WestJet, Government of Alberta's Digital Citizen Identity and Authentication Program and Alberta Blue Cross. As one of his past clients said "He is a great find, because he is able to do high quality strategic work but is also well-versed in project management and technical details, so he can traverse easily from wide to deep. With Guy, you get skills that would typically be encompassed in a small team of people."

For the last six years, he's been thinking, writing, and searching for new pieces with which to rethink both human and AI System/Bot legal identities, as well as also rethinking learning. He now has an architecture and plans addressing this creating:

- SOLICT (source of legal identity & credential truth)
- LSSI (legal self-sovereign identity)
- PIAM (personal identity access management) system
- DLT (digital learning twin) feeding an
- IEP (individualized education plan , with all the above
- Leveraging AI systems and bots as well as
- AI/AR/VR environments

Guy consults on this.