Trencher - https://youtu.be/3NJpTfjnvwA?list=PL6Jpysxw3Ty86Cw4ee5DwMgHV8tqyny4R&t=101

Sparks flying - 5:04 at https://vimeo.com/58165438

Soil pulverizer - https://youtu.be/MntSmcsT3e0?t=6 or https://youtu.be/F6ay5qlVV28?t=7

Nut Planter - [13]

Backhoe - https://youtu.be/ToUywCVsSOM?t=10

Ironworker - https://youtu.be/3DlBzax3mKw?t=90

Microtrac - https://youtu.be/YM62_oJczM4?t=46 or https://youtu.be/f8nP2rq6K3g?t=21

3D Printer - https://youtu.be/qRYacJW77Gs?t=17

Large 3D printer - https://youtu.be/Vqv3PsOyoas?t=1089

CNC Torch Table - https://youtu.be/5IqXqnhG2zU?t=1684

CNC Circuit Mill - https://www.youtube.com/watch?v=OkZ0ynYMTWM

More Tractor - 3:22 at https://www.ted.com/talks/marcin_jakubowski_open_sourced_blueprints_for_civilization

Early tractor - https://www.youtube.com/watch?v=q9BW9E6omFQ&t=97s

Other tractor - https://youtu.be/2tOEAWsVH9A?t=289

Auger - 3:06 at https://www.ted.com/talks/marcin_jakubowski_open_sourced_blueprints_for_civilization

Sawmill - https://youtu.be/PbGuo7rpolM?t=61

Brick Press - https://vimeo.com/49864277

Zillow house listing:

Visual Hook:

How much do you think it cost to build this house?

Normally you would expect about $60 for materials, $60k for contractors, snd $60k in subcontracted labour.

[Could you give me a rough breakdown of these costs and I can edit a graphic into the video?]

But what if there was another way? Spoiler: There is.

[Shot transitions to Marcin out front of the house in real life]

And this is proof of it.

[Marcin starts to walk in and around the house while talking to camera]

Before I tell you exactly how much this house cost to build, you need to know that I've posted all of the information you'd need to do this yourself online, completely open source, for free.

[Please link me relevant pages/links to add on screen here]

See pictures - https://photos.app.goo.gl/UG4ENBA7tw3s1fs38

Documentation - https://wiki.opensourceecology.org/wiki/Seed_Eco-Home_4

We're now training students to learn how to do this themselves, to learn 20 trades in the time it takes to learn one and eventually build a full house in 5 days for a fraction of the cost.

I know it sounds too good to be true, so how is this even possible?

Well through an immense amount of planning, research and help from our open source community we took house building back to the drawing board

[Link for relevant pics/footage here from the starting of OSE]

Take a pick from the house related videos here, especially Kickstarter intro video - https://wiki.opensourceecology.org/wiki/Video_List

and now have a full system where just 24 people can build a whole house using a modular, open source design.

[Please link relevant footage of people building]

Take a pick from above.

And these houses aren't some flatpacked, poor quality disasters like many of the new builds you see.

[Footage of Amazon house, and bad new builds]

These are eco-homes, which means they provide…(Please give info here in layman's terms)

6kW of photovoltaic panels for free energy, ease of expansion so that you can add to the house as your needs and family grow, earth contact, heat pump for heating and cooling, superinsulated roof, and water and energy efficient appliances.

It sounds crazy but with our model, I can see people making $100,000 per house in 5 days.

So how much did this house cost to build? Just $60k in materials and $40k in labor.

I've posted the full list of everything you'd need for transparency.

[Please link to the doc]

The house building system is specifically designed to be as expensive as possible and relies on you not finding out that it's not as hard as it seems.

[Marcin is back out front of the house]

Again, I've posted how you can do this [pointing to house in the back of frame] on our website for free.

But, if you want to be guided and be part of the next 24 people we train to build a house in 5 days you can join our 2 week…. (insert details about the 2 week course and full course please).

Builder Crash Course -https://www.opensourceecology.org/builder_crash_course_2025/

END SCRIPT

How to learn how to learn

Some examples for vibe:

https://vm.tiktok.com/ZNdujsmMG/

https://vm.tiktok.com/ZNdu68gcD/

https://vm.tiktok.com/ZNdujtSFp/

Script:

Hook options:

Before learning any skill you need to learn how to learn.

If you don't know how to learn, you're going to waste a lot of time.

If you were never taught how to learn, you're probably living life in slow motion.

I'm Marcin, and I know how to learn.

I have a PHD in energy fusion, and after a bit of a crisis decided to buy some land and with no prior experience I learnt how to build everything I needed like tractors from scratch, and then ***every*** machine that society would need to over.

Now I teach my students 20 trades like carpentry and electrical in the same time most people take to learn one.

In our course at open source ecology, one of the most important things I teach people is how to learn.

Please expand on the below with a draft script and I'll edit further:

- Mindset (Growth mindset, the thing getting in your way is your beliefs about yourself)
- Fineman method?
- Teaching is the best way to learn something.
- Good teachers.
- Other stuff?

First, we learn by working together, so that we build a house in only 2 weeks - instead of 6 months like in the construction industry. That is 12x faster right out of the box. That's when we learning. Once we learn - we can build a house in only 5 days - which is 30x the normal rate.

Second, you learn by gaining purpose - which starts with moral intelligence and character to work on something larger than yourself. We're solving housing, which fuels us with unlimited motivation. We work on important problems.

Third, we learn by osmosis by being surrounded with others who teach us, and we teach each other because the best way to learn is by teaching someone else,

Fourth, we create a rapid learning environment. We call this the Rapid Learning Facility - a place filled with learning kits of all the techniques - prepared modules such as a wall, heat pump module, PV mounting - various details that you can practice in a few minutes each.

Fifth, we learn across disciplines. I teach design, engineering, and build at the same time - because if you understand all three at the same time - you can build much faster. If you understand the design and the requirements - then you know exactly how to build and modify without unnecessary finessing of detail that adds zero value and without missing critical details. Less rework.

Sixth - we teach integrated design. If you understand how all the design elements work together, then you can design for simplicity and easy build, without things getting in each other's way. (such as framing being in the way of plumbing, or things not fitting). Less rework.

Seventh - our build system is modular like legos. For example, we build 4'x9' wall modules with electrical and plumbing already installed, so the build goes much faster. These modules can all be built in parallel by many people, then assembled rapidly into place. By using modules - we need to understand onaly how modules work and how they are combined - as opposed to understanding entire structures - so the learning curve is much faster.

Eighth - we learn CAD and digital design. We have the entire house model in parts, so we can understand it easily on a computer screen, and even 3D print parts as we go along. We can generate all blueprints and technical drawings of part details

Ninth - our work is open source, so this means no trade secrets. We learn and document best practice, so everyone could benefit from improved house designs which get better with every iteration.

Tenth - we learn from the best. We hire specific practitioners to show us the cutting edge - such as thermal batteries, geothermal, aquaponic greenhouse additions, biodigesters - or to teach us new enterprise such as how to start a factory-build modular home business. We host Extreme Design/Build Sprints - inviting a mix of practitioners, students, subject matter experts, builders, documenters, and entrepreneurs - to collaborate on site with a global remote participation team - creating immersion, rapid prototyping events.

Eleventh - we document like mad. We use Ikea style build diagrams to make everything easy to follow.

12th - We use different perspectives - Zachman Framework - where we teach our people to view things from all perspectives at the same time - the executive perspective, business management perspective, architect-engineer-technician perspective - and the user perspective. In our game, we are architects-engineers-technicians-users at the same time, and in the leadership track we teach the management and executive perspective as well. We believe that only such integration can make us fully responsible citizens. **Here is the 5 legged dog analogy - builder-teacher-entrepreneur-open-collabolator - 1 in a million audience. But that's our secret sauce to superperforming rapid learners. The teacher perspective means teaching like you were talking to a child - simple language - which is the Feynman Method.**

This is how we learn 20 trades in the time it takes to learn one. Forget about a single trade and decade of practice before you are a master of x - you can become a master of 10x. This applies to building homes, and redesigning civilization from scratch..

WHAT FOLLOWS IS MY LONGER BRAIN DUMP—----------

I teach that before you start, you must have motivation. For us, it is making a better world by building a new version with nobody left behind.

This is Moral Intelligence - some call it divine - some call it purpose - but it boils down to admitting that there are real problems in the world and solving them means doing something about it.

Which mean mind expansion because there are many so called impossible problems like the housing crisis or war. To get beyond, you start with BHAG level ambition - purpose. Then you become super motivated.

But part of it is thinking about something much larger than yourself - how can you help not only yourself but everyone while you are at it because if you have a problem that typically means that thousands or millions have it too. So you think about helping others and you will have much more fuel if that can help everyone and everyone will feed you too as you do good work and what goes around comes around. That's motivation. And it relates to not being alone - a disease in today's society. You don't have to solve problems yourself - because you can collaborate. So the most powerful thing to learn how to learn is start to collaborate, immerse yourself in a learning community, which is exactly what we do at the Future Builders Academy. But it must be open source to the bone - no trade secrets, no competitive waste so it is just unleashed learning in where you learn from others and you teach others because everyone is in a social contract of empowering everyone else. Teaching is the best way to learn something - more than the hands on that we do every day and more than the theory we study in class. We are creating a community - but because we do open source design we benefit the world and that builds a global community of good will which goes back to deep purpose and moral intelligence to understand that we are all in it together and there is no us and them. Compare that to college or ladder climbing in a mindset of scarcity. Instead we build the ladder and grow the pie as we fundamentally believe in abundance. We are in full immersion, such as Rapid Learning Facility with learning kits where you can study design and CAD and build instructions and bills of materials and then you practice from learning kits to learn everything in the shortest time possible.

Open learning - means no trade secrets. Think again if you're learning anything practical in college - no real design, just poor stuff that has no economic mojo because most advanced stuff is proprietary by definition.

In our program, we start with an assessment of your hard and soft skills across the board, from executive, manager, architect, engineer, technician, or user qualities - to soft skills like character, moral intelligence, integrity, humility, empathy, listening skills, communication skills, negotiation skills etc. We track these to tailor the program to your needs - and we track this in time.

We track build rate and skill - speed and quality of various performance - so you can set your own pay and tasks. This is collaborative. We collaborate on data collection for your skill set on a regular basis - as we are an experiment of human learning capacity and rate.

We give everybody an A in terms of the art of possibility. We teach about what is possible, so that people are even aware that it is possible to level up in any skill whatsoever. But to level up - you have to first gain the understanding that such possibility exists in the first place. And then, we assume that you can do anything, as we are allergic to negative psychology that says things are not possible. So we define peal performance, as a starting point.

We build humility - and esteem - at the same time - for openness to learning, and willingness to make mistakes, as we encourage mistakes to accelerate learning.

We do service trips each year, as it can be eye opening and humbling to serve others or to learn about worlds much different than your own.

Open information means you have access to CAD so you can inspect, analyze, and digitally manipulate meaning you can do that at the speed of light or as fast as you can handle information - which is transparent in CAD models as you can look at each layer and disassemble virtually - which is much faster than in real life where you have to build things and take things apart.

But we even transform real life with swarm builds, and 5 minute design - where we design our machines so that any part can be taken apart in 5 minutes as opposed to my tractor that broke and i was broke too because it took 12 hours to break apart the tractor just to access the part that was broken. THis means more time spent learning, less time cussing when you can't take something apart because of poor design.

Integrated design is a big deal - we consider the build in the design and not leave out things like where pipes and wires go -we design houses to include actual utilities so everything is routed and you know where things go so you don't have to figure it out meaning you already know it and don't have to wast time in inefficient build. Time that you could spend on other things such as sensemaking or understanding bigger things

How does our group immersion and teaching work - By building a complete house from scratch as a 24+ person, coordinated swarm - you are being thrown into a rapid learning environment where everyone pulls together, teaches each other, and has a fun learning experience. We focus on rapid learning in the Rapid Learning Facility - learning by using prepared learning kits. We use open, documented design - meaning that you can access best practice without being limited by trade secrets. The result is higher quality, lower cost, and faster build time, breaking the Iron Triangle of production.

We do swarms. When you build as 24 people highly coordinated, you simply get so much more built and you build a house every 6 months meaning you just go through a learning cycle faster.

Full immersion - it's like camping with power tools - because our BHAG is building an Experimental Prototype Community of tomorrow what Disney called EPCOT so that has mojo to motivate people to learn a wide set of skills.

But the key is integrated-Multilevel-deep generalist-learn by teaching- interdisciplinary, survey approach. The tech we do is modular like legos so you can apply one building block in many situations and if you learn many situations (meaning interdisciplinary, non-siloed learning at different levels of complexity or angle or discipline for the same topic - you are exposed to

repetition and multi-points of view and multiple intelligences that cross fertilize your understanding. What you'll notice, is that once you learn building blocks, you see how to apply those building blocks to other areas such as building a tractor frame or a 3D printer frame is similar to building a house frame - patterns repeat.

Here is the 5 legged dog analogy - builder-teacher-entrepreneur-open-collabolator - 1 in a million audience. But that's our secret sauce to superperforming rapid learners.

You learn pattern recognition, and you learn to count - numeracy - so you can make calculations and make judgment as a lot of good judgment is based on counting. You just became an engineer and physicist. We teach you basic principles of physics and first principles thinking where you analyze problems at a fundamental level. We also teach you basic mental models across all disciplines which means pattern recognition across many different areas. And then there are basics - how to read effectively, speed read - or not read by being selective what you put in you mind. We teach you focus and mental hygiene - through meditation and introspection. It goes back to psychology of motivation of moral intelligence of what it right and wrong and the drive to uplift the good. It is about becoming an integrated human who has a sound mind, sound body - so proper rest, sleep, exercise, and good food are what we practice even by growing our own things, physical exercise and body-mind arts, and learning how to calm or excite our mind - or to calm or excite our body through exercise, temperature, or just the weight room or physical work.

And we also combine art and science. Science is tech, and art is making things beautiful or functional or integrated ecologically as we build our environment around nature, not destroying nature to build our environment.

We learn to understand by first principles thinking and learning common mental models, and augment it by practice, building things, designing things - and solving enterprise problems by building new infrastructures for the built environment. And the built environment and technology leads to institutions and peoples' behavior that rides on top of them - so our learning is fully integrated. You do things so that understanding emerges - you do not understand by just thinking - but building things has real impact and teaches you understanding - especially when you are affecting other lives in a fundamental way.

What is the role of mentors and teachers? We select for people who can teach others various skills, and contribute to a core kernel of technology (Global Village Consruction Set) and who contribute to an enterprise infrastructure (governance, business, law, operations, management, architecture

That's what we do every day at the Future Builders Academy. Chat summary.

Who Am I video:

I finished my 20s with a PHD in fusion energy and then I discovered I was useless. I had no practical skills. I couldn't do X, I didn't know how to Y.

I couldn't build a thing or do anything practical - i guess you can call it the consumer lifestyle.

I think a lot of people can relate to this in the modern world.

So I did what every young person with big dreams wants to do, I bought some land and started my own farm, to live independently, and free…

I bought a tractor… and it broke. I paid to get it repaired, then it broke again and pretty soon the tractor and I were both broke.

So I decided to build my own tractor, something that was low cost, could be maintained and essentially last a lifetime.

This was the moment that changed everything. Because I realised that….

Industrial productivity can be achieved on a small scale.

So I built more, and started to post the designs, schematics and video instructionals online for free on an open source wiki I created.

I calculated that humanity needs just 50 machines in order to build a civilization. And I want everyone to have access to the information needed to build all of these themselves, so I started Open Source Ecology.

And then something unexpected happened.

Other people started showing up. Experts and curious people from around the world started contributing to our knowledge base.

We currently have the prototypes for 17 of the 50 machines. But we're going a lot further than machines now…

We realised you could build an entire house in just 5 days for a fraction of the cost with 24 people.

So I started doing that.

Now I might sound like a mad scientist, and I probably am, but you don't need to be to do this yourself.

Our first house just got put up for sale if you want proof. And all of the information you'd need to do this yourself is on the open source ecology wiki. For free.

Now we're looking for 24 students to guide and train so that they can do this themselves, and build affordable eco-homes across America in the fraction of the time and cost that you're told it takes to build a home.

You'll learn 20 trades in the time it takes to learn 1, with like-minded people who want to build the world in a different way.

But that is only the beginning. Because our current goal is to rebuild all of civilization, technology, and institutions by starting experimental prototype communities of tomorrow - learning from today's practice and designout out all the pitfalls with open, global collaboration.

Don’t wait as long as I did, we’d love for you to join us.

END SCRIPT