Raspberry Pi Foundation
Theory of Change

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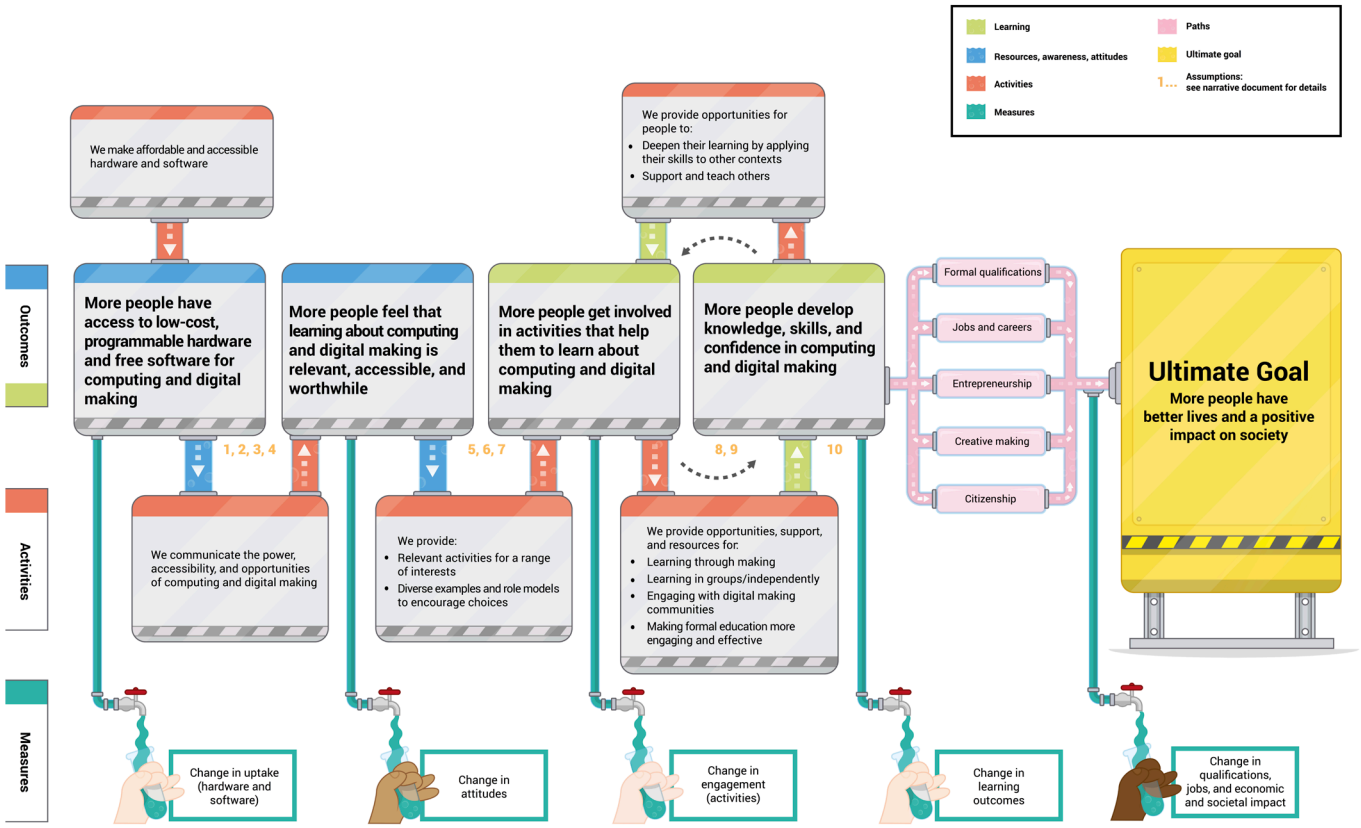
www.raspberrypi.org

Raspberry Pi



Raspberry Pi Foundation Theory of Change

The Raspberry Pi Foundation is on a mission to put the power of computing and digital making into the hands of people all over the world. This Theory of Change sets out the outcomes we aim to achieve in order to fulfil this mission, and how our activities lead to these outcomes.

Goal

Our ultimate goal is for more people to have better lives and a positive impact on society because they have learned how to make things with technology.

We do this by helping people learn about computers and how to make things with computers. We believe that making is the best way to learn about digital tools, and we encourage people to learn through ‘digital making’.

Terms

Digital making brings together the power of digital technology and the philosophy of the maker community: people create meaningful things using digital technology, and they learn as they do so. Computing is the study of computers, how they work, how to use them effectively, and how they affect the world. It includes computer science, information technology, and digital literacy.

Narrative

This Theory of Change sets out the outcomes we need to achieve in order to reach our goal. The outcomes and our activities link together in a logical sequence, as set out in the diagram. Each outcome is predicated on the one before it.

Depending on a person's situation and prior experience, they can enter this sequence at different points. People can achieve an outcome through participating in our activities, or due to circumstances in their environment or the work of other organisations.

Outcome: More people have access to low-cost, programmable hardware and free software for computing and digital making

To learn digital skills and to shape the digital world, people need to have access to tools that are affordable, easily available, and designed to allow tinkering and adapting.

We work to provide low-cost, high-power computers and associated software so that affordability is not a barrier to participation in digital making. We design resources as modifiable tools that do not hide their underlying construction from their users. Tools that allow tinkering encourage curiosity and give people agency. Our activities and learning resources support people to use hardware and software, which we and others have developed to support people to learn.

Outcome: More people feel that learning about computing and digital making is relevant, accessible, and worthwhile

We make people aware of the possibilities that digital skills can open up, and of where and how to develop those skills. We show people that computing and digital making are topics that anyone can learn, even if it is hard sometimes. To support this, we provide examples that computing and digital making are relevant and fun, so that people are encouraged to learn more, and feel empowered to do so.

Outcome: More people get involved in activities that help them to learn about computing and digital making

We provide opportunities to help people develop the knowledge and skills they need to participate in computing and digital making. From the start, it is important for people to take an active approach to learning, solve problems, and create something tangible, so that they understand the nature of computing and digital making and the sense of achievement they can give.

More people gaining introductory skills leads to a greater understanding of the power of computing and digital making and the problems they can solve. These skills can be gained through informal learning, through learning in communities, or through formal education. Our activities provide structured opportunities for informal learning, they support communities to grow and help others learn, and they help teachers to provide formal education in computing and digital making in engaging and effective ways.

Outcome: More people develop knowledge, skills, and confidence in computing and digital making

Once people have gained skills, they have a choice to continue to develop these further. We work to encourage more people to make these positive choices, regardless of their backgrounds. People make choices for a number of different reasons, and our work takes this into account by providing a wide variety of role models, as well as various contexts and routes for engaging with computing and digital making.

We also help more people develop more advanced skills and take pathways towards becoming highly skilled in a particular area or range of areas. Our work takes account of prior learning and provides the challenges and incentives people need to progress and challenge themselves.

Making choices and learning advanced skills is an ongoing process, with people mastering one area, deciding to master another, and then continuing to learn. This process takes place even for those seen as experts in computing and digital making. We aim to help more people from every background to enter into this cycle and develop their skills.

Some of those who become more skilled play an important role in teaching and supporting others to learn. We encourage and support people to use the skills they have learned to give back to their communities and support the learning of others. This is why an important part of our activities is to inspire people to help others to learn, and to make sure that they have the skills they need to do so.

Ultimate goal: More people have better lives and a positive impact on society

With sufficient computing and digital making skills, more people will act to solve problems and express themselves creatively in the world. In some areas, the skills for this meaningful action can be acquired quickly, while in others, it can take longer.

The skills gained through problem-solving and creative making can enrich people's lives and enable them to engage with society in meaningful ways. They may achieve this through a variety of pathways, including through gaining formal qualifications that lead to jobs and careers.

The ability to solve problems and take flexible approaches to learning, and the confidence and experience to make things happen, are also important parts of modern and future work. Some people create value for themselves and their communities through entrepreneurial activities, as commercial or social entrepreneurs. People also gain value from creative making, creating things to enjoy or express themselves.

A better understanding of the impact of technology on society is an important part of modern citizenship. We need to be well informed so that we can make choices and hold to account those who represent us and make decisions that affect us.

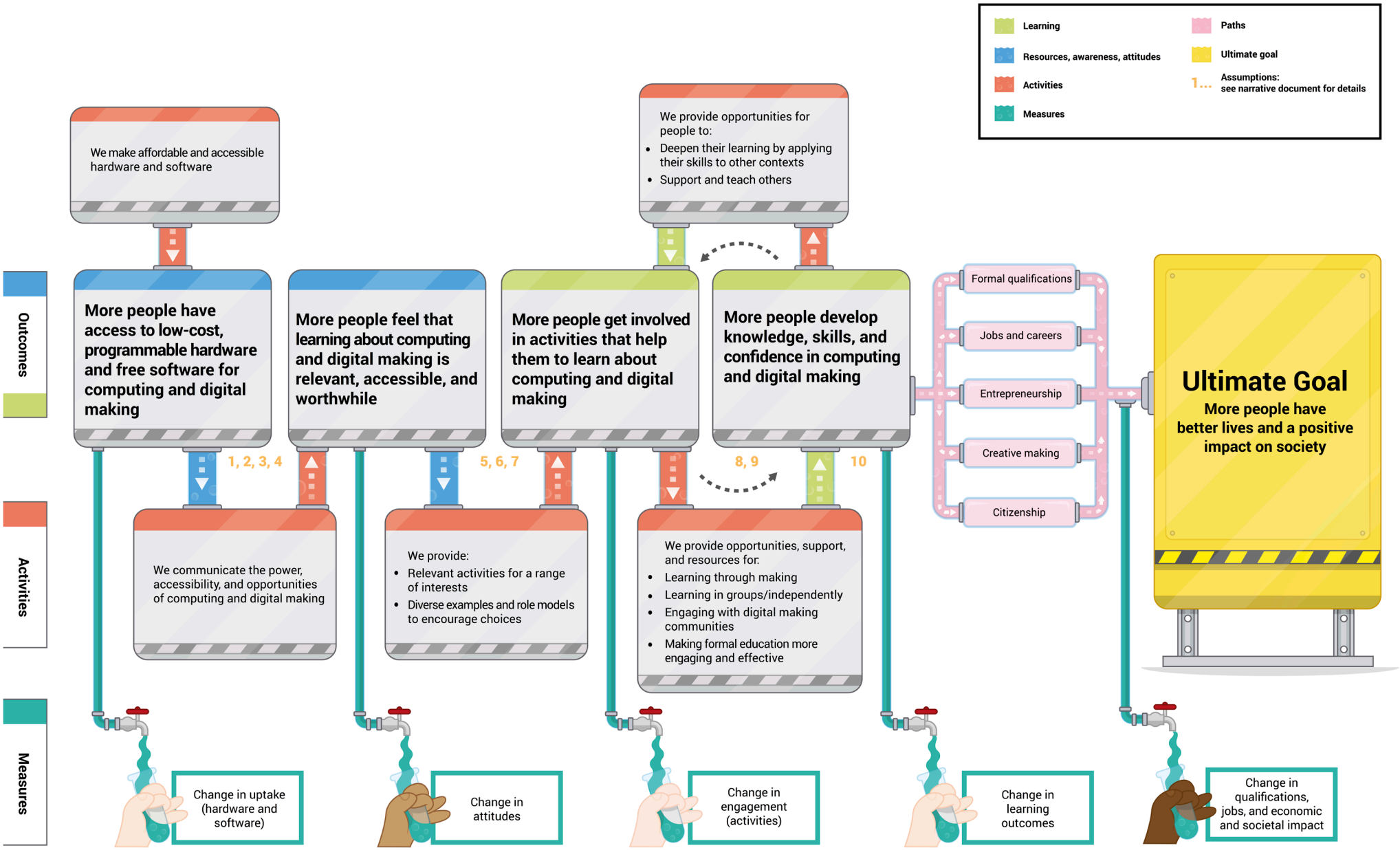
Whatever pathways people take, they will continue the cycle of learning they started in becoming digital makers. Some people take action to teach and support others, helping more people to develop digital making capabilities. Communities are the catalyst for all of this activity, bringing people focus, purpose, and support for their learning, and a context for developing skills to shape the world.

There are some outcomes that we can claim some contribution to, alongside the diverse work undertaken by the many other people and organisations involved in the field of computing and digital making; and there are other outcomes that we can legitimately take responsibility for and directly measure our success against. Our contribution joins those of many other organisations and of the individuals themselves in the shared progress towards our ultimate goal.

Assumptions:

See numbered points on the diagram

1. Demand for our technology is sustained, meaning that tools are provided and revenue continues to be generated
2. People can afford to buy hardware and accessories, and can access software and learning resources
3. Policy environment remains stable (enabling context remains)
4. Audiences are accessible to us
5. People are able to make the time to learn new skills
6. Parents think computing and digital making skills are important for children to learn
7. There are venues suitable for community events in all geographical areas
8. Adequate resourcing of education environment (formal or informal)
9. Computing and digital making communities are open and welcoming
10. Community participation sparks action and learning


Learning
Resources, awareness, attitudes
Activities
Measures
Paths
Ultimate goal
1... Assumptions: see narrative document for details
Outcomes
Activities
Measures
We make affordable and accessible hardware and software
We provide opportunities for people to:
• Deepen their learning by applying their skills to other contexts
• Support and teach others
More people have access to low-cost, programmable hardware and free software for computing and digital making
More people feel that learning about computing and digital making is relevant, accessible, and worthwhile
More people get involved in activities that help them to learn about computing and digital making
More people develop knowledge, skills, and confidence in computing and digital making
Formal qualifications
Jobs and careers
Entrepreneurship
Creative making
Citizenship
Ultimate Goal
More people have better lives and a positive impact on society
1, 2, 3, 4
5, 6, 7
8, 9
10
We communicate the power, accessibility, and opportunities of computing and digital making
We provide:
• Relevant activities for a range of interests
• Diverse examples and role models to encourage choices
We provide opportunities, support, and resources for:
• Learning through making
• Learning in groups/independently
• Engaging with digital making communities
• Making formal education more engaging and effective
Change in uptake (hardware and software)
Change in attitudes
Change in engagement (activities)
Change in learning outcomes
Change in qualifications, jobs, and economic and societal impact

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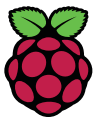

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