

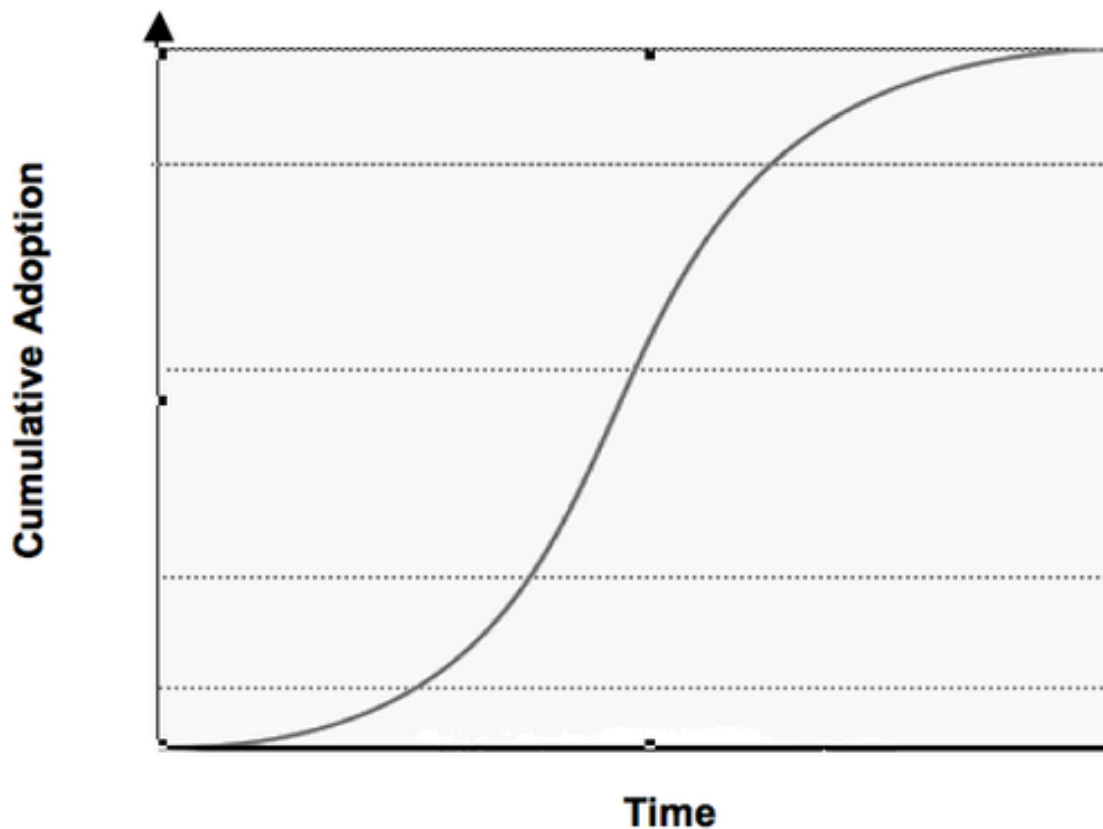


Accelerating Diffusion

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Managing Innovation

Accelerating Diffusion

This tool is designed to help understand the ways in which innovations diffuse across a population – and how to use this knowledge to accelerate the process. People don't simply accept changes – new products or services, new processes, new business models. Instead there is a pattern in which some are enthusiastic early adopters whilst others may take a long while to make up their minds. Whether we are talking about toothpaste or high technology machinery the same pattern will appear and it takes the form of an 'S-curve' – see below.



The key question is not whether or not this happens but rather what affects the slope of that curve? The steeper the curve the faster diffusion takes place. Extensive research suggests a number of factors which influence it and we can use our knowledge of these to manage the process of introducing a new idea. Much of the work on how we can accelerate adoption and diffusion comes from the work of Everett Rogers and this tool is based on his approach.

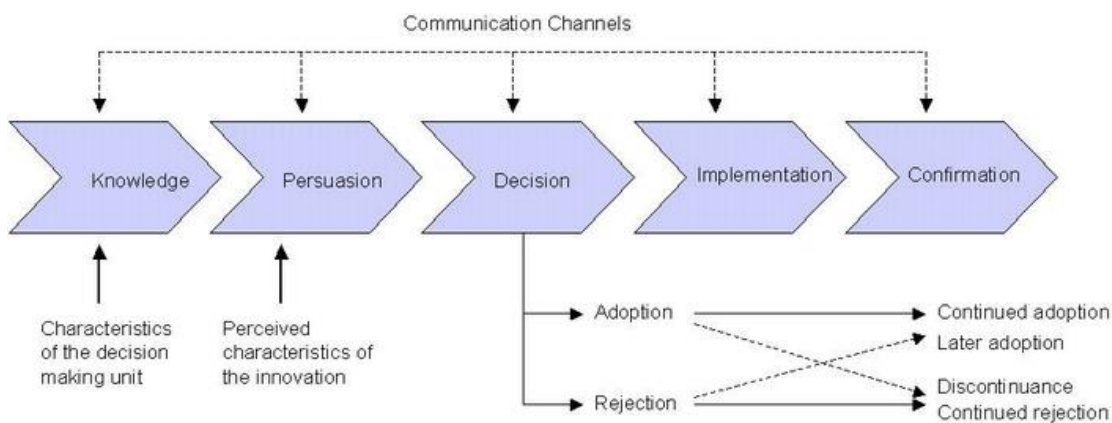
The first stage is to recognize that diffusion can be seen as a process of communicating a new idea and that process has several elements:

- A source – someone trying to introduce it
- A receiver – the target recipient
- A message – the innovation itself

- Various channels along which the message can be communicated
- The effect that message has
- Feedback



He suggested that the process of adoption involved such communication and followed a pattern where receivers learn about something new, they evaluate it and make a decision to adopt or not. They then implement that decision and either continue using the innovation or abandon it.



Innovation-decision process from Rogers(1995)

We can see the key elements of each stage in this table:

Stage	Definition
Knowledge	Here the individual is first exposed to an innovation but lacks information about the innovation. If we want to accelerate diffusion we might increase the availability of knowledge or use different channels to enhance the likelihood of the individual becoming aware of the innovation.

Persuasion	In this stage the individual is interested in the innovation and actively seeks information/detail about the innovation. Here we can help shape the perception of the innovation by providing information, reassurances about negative aspects and accentuating the positive benefits.
Decision	This stage involves the individual taking the decision to adopt or reject. We can influence this, for example by staging the risk so they don't have to commit completely – for example by offering a trial version or a trial period of use. The 'freemium' model for software is a good example of this where adopters can try before they buy.
Implementation	Here the individual gains experience of using the innovation and modifies his/her perceptions based on that experience. Providing after-sales support and service are ways of helping ensure that this experience is positive and the innovation remains useful. Customer help lines and bundling in after sales support and troubleshooting can play a key role.
Confirmation	Here the decision to stay with the innovation or to abandon it takes place. Confirmation is important because the individual is then likely to be a reference point for others in what is a social process. Equally if they abandon the innovation this can slow down wider diffusion.

Using what we know to accelerate diffusion

Looking more closely at these elements we can make use of characteristics which we know are influential in accelerating or retarding adoption. They provide levers which we can use to shape and present ourselves (as 'sources') and our innovation (the 'message') in ways which appeal to particular 'receivers'.

(a) Innovation characteristics

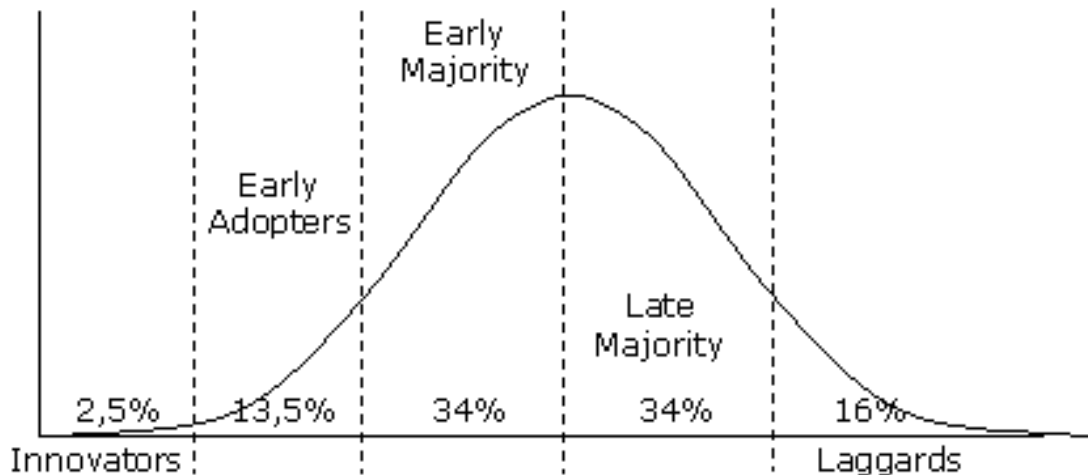
The key point here is that different people perceive the characteristics of an innovation (the 'message') in different ways and this is a subjective judgment. Whether or not our innovation is the best new thing since the invention of sliced bread is not the issue – it is how others perceive it which matters. So it helps to understand the key dimensions or characteristics of an innovation and how we can manage and shape perceptions around it. This is what advertisers do in their attempts to persuade us to adopt new products or services. Rogers lists five innovation characteristics and these provide a helpful checklist:

Influential factors in adoption	Key checklist questions
Perceived relative advantage	<p>Do we have evidence to prove a difference in performance on some dimension?</p> <p>Can we emphasis those features in our presentation of the message?</p>
Observability	<p>Can we show the benefits – seeing is believing?</p> <p>Can we make visible the advantages of our innovation?</p>
Complexity	<p>Can we present our idea in simple form?</p> <p>Can we make the idea easy to understand and communicate?</p>
Trialability	<p>Are there opportunities to ‘test drive’ the new idea before making a full commitment?</p> <p>How can we divide up the risk in adopting our idea – for example a trial version, a trial period?</p> <p>Can we engage users in co-developing a prototype so they can shape and try it and bring their ideas into its design?</p>
Compatibility	<p>How well does the new thing fit into our current world? For example, does it fit physically, does it challenge cultural values and norms, does it disrupt behaviour patterns or power relationships, etc.?</p>

(b) Adopter characteristics

Not everyone is as enthusiastic about new things – as Rogers highlighted in his review of many studies. Typically there is a distribution across any population – see the figure below:

Rogers Adoption / Innovation Curve



The exact numbers are less important than understanding that there will be different approaches by different people. So we could benefit from understanding these different segments and how to work with them to accelerate diffusion.

The first group – the ‘innovators’ – are very favourably disposed to new ideas – they embrace and enjoy them. Included in this group are those ‘user innovators’ who are so keen to have the new thing that they contribute their own ideas and prototypes! What we know about these people is that they are highly motivated – they really *want* the innovation – and they are tolerant of it not being perfect. That’s important because they are a good source of ideas and a good test-bed for prototypes which are not perfect – for example, beta-testers of new software. But the downside is that they are ‘socially marginal’ – that is, they are seen as being on the edge of their social groups rather than at their centre. So their influence on others is not necessarily high in terms of persuading them to adopt.

That role belongs to the second group – the ‘early adopters’. These people are also in favour of new things but only after they have evaluated and explored them. But they are seen as socially central which means that they are people who others follow – and persuading them to adopt will provide a role model and strong influence on others. For this reason marketing groups seek out and target early adopters in different communities.

Early and late majority are, as the name suggests, the mainstream along the S-curve and the ‘laggards’ are those who will be very late in adoption or may never adopt.

In terms of useful lessons about promoting adoption the message here is to try and understand the world of the potential adopter and find ways to speak their language, view the innovation through their eyes and present its features in terms which they will see as favourable and a good fit with their world. This can include their social values, their working practices, their prior experience; it plays on their perception of the 'compatibility' characteristics of the innovation. It means that it is important to find ways of understanding the innovation from their perspective and using this to design and implement it.

Also important here is the role of 'opinion leaders' – people who are early adopters but whose position in the social system means that they have influence on the thinking and behaviour of others. Identifying and working with such people is a core part of strategies to accelerate diffusion. Test marketing, trials and other tools targeted at influencing this group are often used and advertising ('persuasion' in Roger's model) often features such opinion leaders.

(c) Innovator characteristics

The other side of the communication process is the innovator – the one trying to persuade someone to adopt a new thing. Research here suggests that a number of factors are relevant but one of the most important is that people are more likely to adopt something new from someone who they perceive to be like them. So finding a common language, being aware of the world in which they operate, matching as far as possible with their values and beliefs will be an important aspect in enabling adoption.

For example, someone trying to sell a new technology from a university environment may meet with resistance from a potential adopter who feels there is a big gap between their two worlds. Or an advertiser aggressively promoting a new financial service may be perceived as untrustworthy and so bias a potential adopter against the idea. Research suggests that adoption is more likely to occur when the 'innovator' trying to introduce the new idea is perceived as being 'one of us' – an idea called 'homophily'. This goes some way to explaining the 'not invented here' effect where innovations are rejected by a group because they originate from outside the group. It goes back to a field of psychology called 'social identity theory' which highlights our tendency to split into the 'in group' (to which we belong) and the 'out group'; essentially we trust new ideas from people in our group and are suspicious of those coming from outside.

In terms of promoting adoption this raises a number of factors we can work with:

- Source credibility – how to give the impression the 'innovator' is credible and trustworthy? For example advertisers often use doctors to promote innovations since they are perceived as reliable and trustworthy and also authoritative in terms of their knowledge base
- Homophily – how to give the impression that the innovator is like the adopter? Ideas spread fast when they are perceived as coming from credible 'people like us'

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- Compatibility – how to ensure that the innovator understands the adopter’s context and the ways in which they are likely to perceive the innovation and how well it fits?
 - Opinion leadership – innovations diffuse as part of a social process so finding and working with opinion leaders – early adopters – can accelerate it. By definition such people are already in the social system and have high credibility and so can accelerate adoption.

One powerful way of dealing with this issue is to engage adopters in the design and implementation of the innovation. User-led innovation is a powerful source of new ideas and these can not only improve the innovation itself but also accelerate its diffusion. For example in ‘change management’ (where the challenge is introducing process innovation, changes in the way and organization works) a powerful tool is involving users to design or modify the change so they accept and embrace it. The innovation becomes ‘their innovation’ and they have an interest in making sure it is implemented and works well. Similarly working with early adopters can provide useful information about how to shape an innovation so that it is a better ‘fit’ with the majority of the marketplace.

(d) Environment and infrastructure

Innovations do not exist in a vacuum; they are located in a physical, social, economic and political context. These factors can create favourable or unfavourable conditions which affect rates of adoption. For example, trying to encourage people to adopt a vaccination against ‘flu would be easier to do in a context where there was a ‘flu epidemic and people were concerned for their health. Equally promoting the adoption of energy saving technology in the home would be more difficult if the economy was booming and people were not concerned with cost savings around the home.

One important area where context affects adoption is in innovations which depend on ‘network effects’. That is the more people use something the more potential it has for others. Mobile phone networks, social media platforms, mobile money systems and the Internet are all examples of this. When there are few connections in the network there is little incentive for others to join, but when a critical mass is reached then the process accelerates and the network develops ‘emergent properties’. People start experimenting and discovering new uses to reinforce the core idea but also extend it; Facebook is a good example here. For organizations trying to promote innovation bidding early traffic across networks – for example by offering a discount to early adopters – is an important strategy.

Another version of this challenge is the infrastructure around electric vehicles. They offer significant energy and pollution-related benefits but their widespread adoption is held back by the lack of an infrastructure to support charging or battery replacement. Promoting this kind of innovation depends on pump-priming investments in such infrastructure.