How to Achieve
Lasting Impact at Scale

What we can do
What we can't do
and
What we need to learn

- Lasting
- Impact
- at
- Scale

- Lasting (Impact that endures over time, and with successive populations)
- Impact
- at
- Scale

- Lasting (Impact that endures over time, and with successive populations)
- Impact (Measured change in children's health and development that matter to families and public systems)
- at
- Scale

- Lasting (Impact that endures over time, and with successive populations)
- Impact (Measured change in children's health and development that matter to families and public systems)
- at
- Scale (Impact at population level)

THRUSH: yeast infection. usu. affects mother AND child. makes everyone mad.

GENTIAN VIOLET: liquid gold. best $1.79 you'll ever spend. works better than the prescription meds your doctor will give you.

(it says "for external use only" HOWEVER. you should take a q-tip and swab the insides of your babies cheeks after every feeding. a little goes a l-o-n-g way. also: apply to your nipples to avoid getting thrush yourself. (it hurts real bad.) also, if the thrush has gone through your babies system and has come out the other end (*cough*diaper area*cough) you can also apply some to their bottom, with a damp cloth, because then you're sorta wiping some of the yeast away while treating it at the same time. Srsly people, LIQUID GOLD)

**How to Achieve
Lasting Impact at Scale**

What we can do
What we can't do
and
What we need to learn

Asking questions about an organization's capacity misses the point

Every organization, however large or powerful, is part of at least one system. And it is the system's capacity that matters, not the organization's.

Moreover, even if one organization has the independent capacity to deliver, asking them to do the job alone may demotivate others in the system, which in turn produces negative feedback for the one selected for the job.

So scale experts think and speak about the system as a whole. They ask whether *we* have the resources *we* need.

At capacity

A heavy-laden truck on an Indian road.

Photo: Clive Moss

Pessimism

Every great scale-up success combines a product and a process

Many scale-up successes are the result of a plural approach: one part invention, and one part dissemination.

Cyrus McCormick made the harvest reaper that transformed the United States from a country of agriculture to one of industry, but the invention spread only after he found a financial model that allowed farmers to purchase his machine from the increased profits it brought to their farms.

Toyota made the 50-year journey from successful sewing machine producer to the world's most successful motor car company not only with the quality of its products, but also with its method of getting the car to the driver "just in time."

Henry Ford invented neither the motor car nor mass production. But his ability to combine them made his company the leading automotive manufacturer for more than half a century.

A product and a process transform a nation

The McCormick reaper – brought to farmers by a clever financing process – makes faster work of an Idaho wheat field, circa 1920.

Photo: www.waterarchives.org

Inspiration

We have to work out what is core to an innovation and what is adaptable

There is a paradox at the heart of scaling interventions. On the one hand, people want to make a product their own; so adaptation is fundamental to successful scale. On the other, if the delivery deviates too far from the original design, there is no guarantee that it will work; so fidelity is fundamental to successful interventions.

The forces of fidelity and adaptation are in tension, but not opposition. They demand careful analysis – both conceptual and empirical – about what is fixed and what is flexible in any attempt to scale impact.

Building the potential to personalize into any innovation is one of many practical consequences of this paradox.
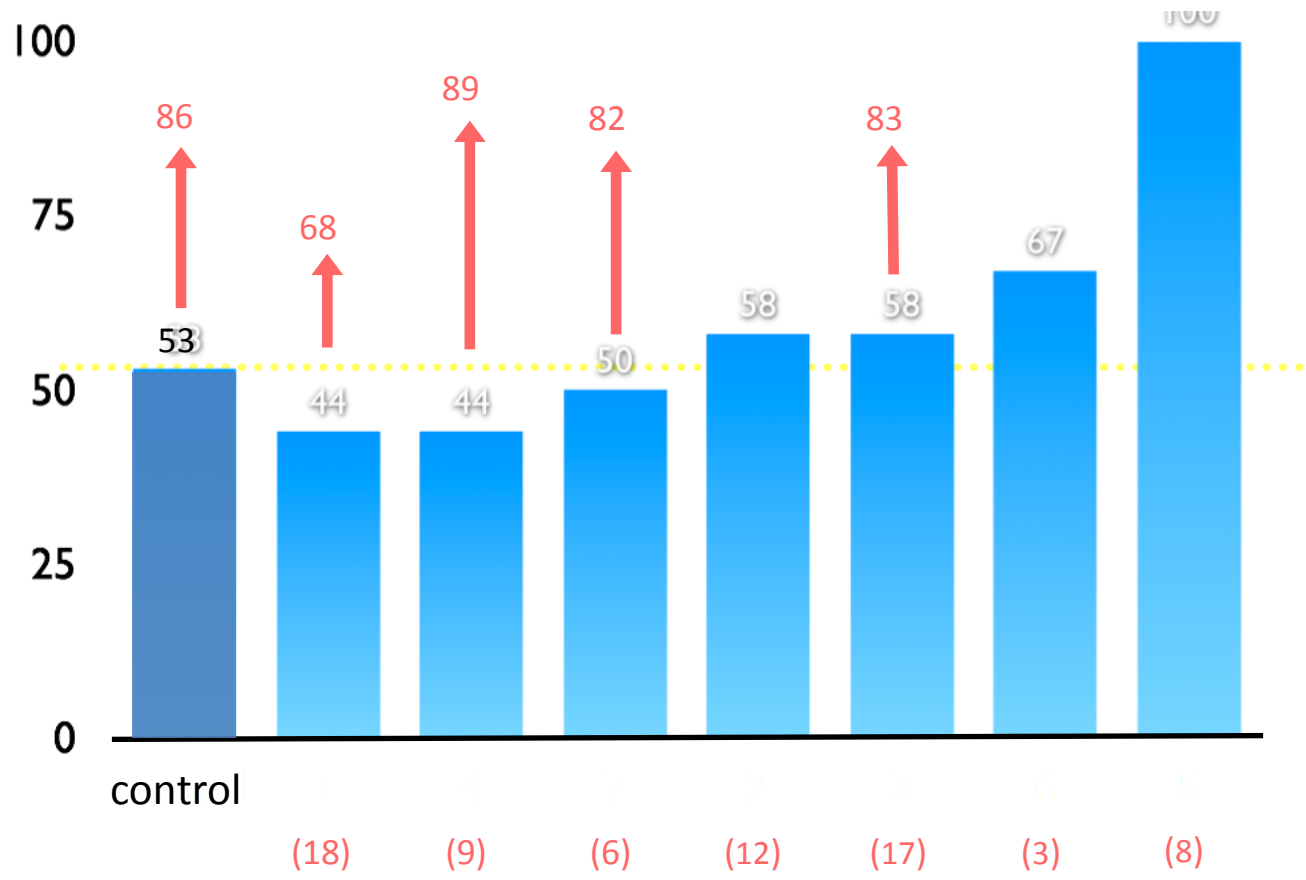

Mother's new car is a cargo bike

The residents of Christiania, a communal neighborhood in Copenhagen, have long had an affinity for customized bikes – easily personalized but practical to the core.
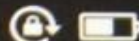
Photo: Mikael Colville-Andersen

State of the art

results

Adopters are not the only adapters

In classical diffusion theory, a product or practice is adapted by its adopters. In reality, adaptation occurs at every stage of the process. From catalyst, through intermediaries, to the end user – every person will make a change, whether consciously or not.

The process of adaptation is difficult if not impossible to control. It can be nudged, or slowed, or accelerated – but not controlled.

Those guiding the scale-up will anticipate predictable adaptations; they will try to imagine the scope of less predictable adaptations; and they will draw lines in the sand beyond which the changes to the original idea render it incapable of producing the desired impact on child and maternal health.

Organic adaptability

The sweet potato plant is one of nature's most versatile food crops, adaptable to a wide range of growing conditions. (Nyagatore, Rwanda, 2010)

Photo: Bill & Melinda Gates Foundation/Frederic Courbet

Inspiration

Consumers don't need to know how the product works; they just need to know what it will do for them

At the back end of a smartphone is the most incredible technology designed, assembled, and supported by a worldwide community of experts.

Explaining how this miracle works does not send people rushing to buy smartphones.

Telling them it will replace their rolodex, filofax, camera, hi-fi system, office phone, calling card, local maps, encyclopedia, and airline timetable all at the same time is enough to create a stampede.

Building a better hive

By observing the way bees really live, an English beekeeper has built a nontraditional shape of hive that helps bees stay healthy. However, consumers don't need to know the details of the shape of the hive to understand that healthy bees mean good food crops – and delicious honey.

Photo: Philip Chandler, The Barefoot Beekeeper. www.biobees.com

Innovations work better when people connect with them emotionally

A community health worker brings skills, expertise, and authority to assist in the delivery of effective health care. But she is also a person to whom mothers and children can form an emotional connection.

Exclusive breastfeeding in the first six months of life, continuing alongside solid foods until two years of age, is proven to improve child nutrition and reduce disease. But it also helps to create and embody the love and attachment that the mother and baby share.

Families choosing products to reduce infection via the umbilical cord look not only at the data on each product's antiseptic properties; they also want a product that represents warmth and care, one that sends a signal to others that the right thing has been done for the new son or daughter.

Appreciating the power of emotional connections is fundamental to scaling impact.

Medicine made friendly

In Ethiopia, health extension workers walk miles to visit families in remote areas. Tens of thousands of women have been trained as health extension workers since 2006, addressing preventable and treatable diseases such as malaria and diphtheria.

Photo: Bill & Melinda Gates Foundation / John Ahern

Inspiration

Feedback is powerful.
Feedback *loops* are even more powerful

An electronic sign by the roadside, telling drivers how fast they are going, will generally cause them to reduce their speed – even though they can read the same information on their own dashboards. Similarly, the information that is fed back to the drivers of a scale impact convoy influences the speed and success of their journey.

If simple feedback has the power to alter performance, feedback loops have even greater creative and destructive power. When a decline in one partner's motivation decreases another partner's motivation, a negative spiral starts. When an injection of resources draws in even more resources, a positive feedback loop is born.
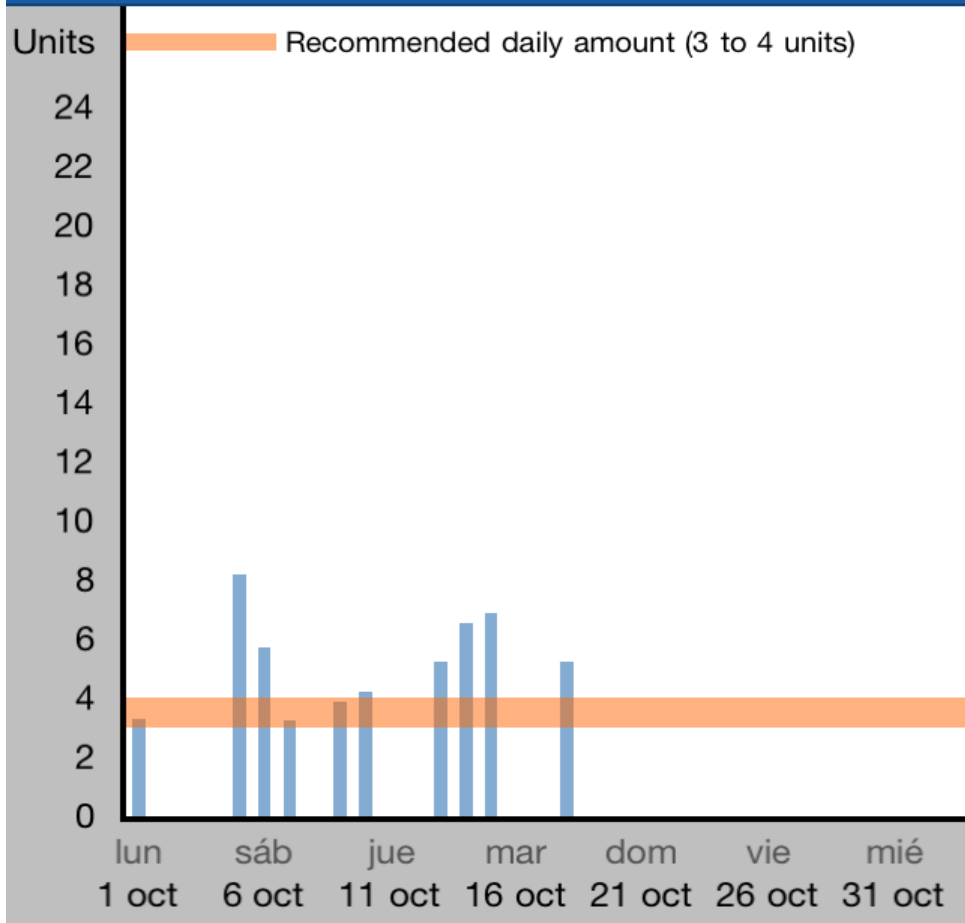

A run on the bank

Like every other social system, financial markets have feedback loops. When brokers hear of a fall in a stock, they may rush to sell, driving the price down further. In the opposite direction, market bubbles are created when enthusiasm feeds enthusiasm.

State of the art

My Tracker

Feedback   Today

Units

Recommended daily amount (3 to 4 units)

24	
22	
20	
18	
16	
14	
12	
10	
8	
6	
4	
2	
0	

lun	sáb	jue	mar	dom	vie	mié
1 oct	6 oct	11 oct	16 oct	21 oct	26 oct	31 oct

Previous   Week Month   Next

My Drinks   14 My Tracker   i Info

People want to know what an innovation will do for them. So we have to mass produce the personal

I have a new smartphone. But it is not just any smartphone: it's *my* smartphone. It has a picture of my daughter on the screen. It has my collection of apps, representing my needs and my interests. It plays the ringtone of my choice and speaks to me in my language.

To the techies at Nokia or BlackBerry or Motorola or Apple, this may be just another clever piece of kit – and the contents of every box are just like every other. But the fact that I can make it personal is part of the reason I want one so much.

What will do it for me?

Kamla Devi has a new mini savings account that she can operate via her mobile phone. She has been able to save money for her roadside flower business, and pay for her daughter's wedding. The mobile banking products used by Eko India's customers are standardized, but, for migrant workers, the results are personal. (New Delhi, India, 2010)

Photo: Bill & Melinda Gates Foundation / Prashant Panjiar

Top 10

We may be able to turn contagion to our advantage

Social life invites contagion of pathogens such as the common cold. But research is increasingly showing how positive forces, such as behavior changes that improve family health, are also "catching."

We tend to believe that we are each special and unique. In some ways, we are more like sheep, following the flock, doing what those around us do. From friends and neighbors and our community, we "catch" how we dress, where we live, what we think, even how we form our families.

Working out how behaviors move through a social network is similar to working out how a virus gets from one person to another. It's a key in the door of impact at scale.
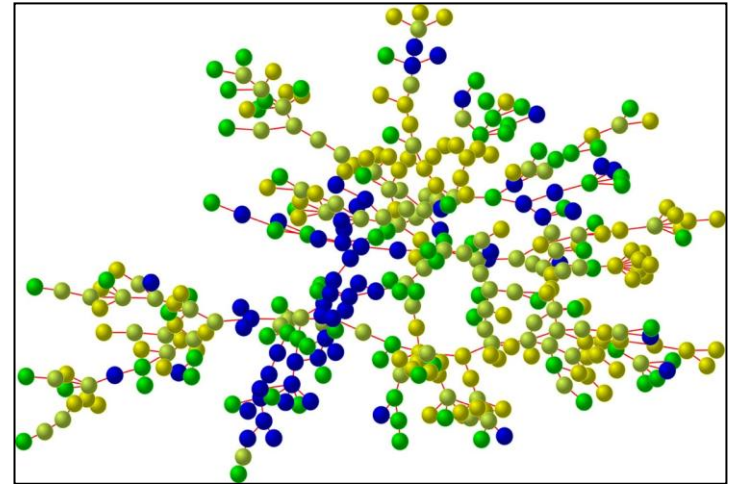
Charting contagion

Harvard medical sociologist Nicholas Christakis is one of the foremost researchers and communicators on social networks. He and his collaborators have found that many surprising phenomena are contagious, such as loneliness, altruism, and obesity.

Network image: Nicholas Christakis

State of the art

Perfection is the enemy of the good.
We have to act on some informed "big bets"

Let's be honest: we have more ignorance than knowledge about how to achieve lasting impact at scale. We have no prescriptions that will ensure our success.

It's worth taking the time to learn more, and we must support the research that aims to build our understanding. But at the same time, millions of lives are lost, and political will moves on to other problems, while we try to find definitive answers.

In all spheres – the public, private, and philanthropic sectors – successful scale-ups often reflect a couple of "
." Those who have succeeded, like Henry Ford or the creators of universal education – have usually taken a big bet on the value of the product, and a big bet on the process of getting the product to market. And, in those successful cases, the big bets paid off.

A big bet that paid off

Henry Ford wasn't the first to invent a motorized vehicle, or the first to use mass production, but his big bet on refining assembly line techniques brought the product to the world. Here, the Ford St. Thomas Assembly Plant celebrates its 200,000th Maverick. (Ontario, Canada, 1970)

Photo: Courtesy of Elgin County Archives

Top 10

It's easy to forget how fence-sitting causes delays

A catalyst's estimate of how quickly an innovation can be scaled should always include an estimate of the delays introduced by prevarication.

When systems, communities, or individual users hear about an innovation that has potential to change their world, they think to themselves, "Is this a horse I should back?" They are what one scale expert calls "fence-sitters."

Their shilly-shallying is not irrational. They may have backed lame horses in the past, and everyone likes to bet on a winner. But it will slow down the process of scale, and (when organizations hide their doubts) give the appearance of agreement and progress where none exists.

Appeasing the fence-sitters by giving two horses a head start may get the race underway, but doesn't often produce the right result.

The cost of keeping everyone on board

An overladen raft sinks in knee-deep water. (Laos, 2009)

Photo: Jeff Lee

Pessimism

Pull beats push every time

None of us likes to be told what to do, no matter how good the advice. Pushing an innovation into place seldom works. Hectoring, scolding, and mandating often backfire.

So we have to work out how to get people to want to pull the innovation into their own lives, until they feel as if they are missing out if they don't get the thing they want.

A "pushed" innovation will die out as soon as the start-up support is withdrawn. A "pulled" innovation will gain traction, and spread, and endure.

The demand for vaccination

In many parts of the world, the demand for vaccination shows how "pull" beats "push." In Pantasma, Nicaragua, mothers are willing to wait in line for hours so that their children can receive the rotavirus vaccine – with the result that 80 percent of children in Nicaragua have been vaccinated against this life-threatening disease.

Photo: Bill & Melinda Gates Foundation / Brent Stirton

Top 10

Build a Kia, not a Cadillac

Given a free hand, designers are, quite understandably, prone to building innovations that are a little too beautiful and a little too perfect. If we're trying to reach a mass market, these will be innovations that do more than the market either needs or demands, and the complexity and cost may make them more difficult to scale.

The only way to understand need and demand is to go and ask the potential user.

If people want a reliable small car that will get them from A to B – and do it cheaply – then why not build them a Kia instead of a Cadillac?

Small, simple, effective

When attending a home birth in rural Nepal, a birth attendant brings a delivery kit the size of a deck of cards: a small bar of soap for washing hands, a plastic sheet to serve as the delivery surface, clean string for tying the umbilical cord, and a new razor blade for cutting the cord. It's cheap and basic, but it helps mothers and babies avoid infection.

Photo: Bill & Melinda Gates Foundation / Toni Greaves

Top 10

What do systems do best? They systematize

It's a very useful tautology: the great strength of systems is their ability to systematize. Pathways and routines are established. Activities become embedded in habit. Roles and customs evolve.

Fully systematizing an innovation creates a kind of system-level pull. It produces a form of intrinsic demand, with the system delivering the intervention routinely and without reflection.

This central characteristic of systems is both their vice and their virtue. Once a system is established it is extremely difficult to change – whether or not it produces optimal outcomes.

A plan foiled by a system

After fire destroyed much of London in 1666, planners envisioned a new city of wide boulevards and long vistas. But the system was too tenacious: Londoners rebuilt their houses and businesses almost exactly where they had been before the fire.

Image: Christopher Wren's plan for London after the Great Fire of 1666

Top 10

We need a new palette of evaluation tools to paint the scale canvas

Our traditional evaluation tools allow us to paint a certain picture. Unfortunately, they may not be the right ones to capture success or failure at scale.

We usually ask about need; we also need to know about demand. We measure fidelity to the original design of the intervention; we also need to measure the degree of adaptation. We need to understand the extent to which a broader reach – into groups beyond the original target population, for example – dissipates the impact found in a controlled trial. And determining what works will extend beyond estimating a number that we call an effect size, into a nuanced understanding of the local context.

We need new tools. We don't yet know exactly what they will look like. But we know that our traditional, deliberate, step-wise approach to designing and evaluating effective interventions is insufficient for the complex, non-linear, real-time world of scale.

Imaging a new set of tools

We know we need new, better tools for evaluation, but we don't yet know what they will look like.

Photo: Stephanie Watson

Pessimism

We accept the need for new evaluation tools.
We don't accept less rigorous science

Accepting the need for non-sequential evaluation does not mean abandoning the level of rigor that orthodox science has come to take for granted. Our eagerness to create a new palette of tools should not blind us to the need to scrutinize whether those tools work in the way we anticipate.

How do we test for validity and reliability? Do the data speak about the people the innovation is intended to reach? Do they measure what really matters? How generalizable are the results to other contexts? Does the way we are articulating the problem make sense?

A scientific method

Well-developed scientific approaches come with a set of ideas about evidence that new methods can learn from. Here, a technician prepares rice leaves for DNA extraction at the Bangladesh Rice Research Institute. (Gazipur, Bangladesh, 2009)

Photo: Bill & Melinda Gates Foundation / Prashant Panjiar

State of the art

We've lost the "L" in MLE

It's generally agreed that scaling impact demands Monitoring, Learning, and Evaluation. The trouble is that in the rush to discover and explore topics that have previously been neglected, a great deal of data has been collected – sometimes too much data – often using methods that fit ill with the questions that need to be answered.

The result is that we have a lot of Monitoring and Evaluation, but we've lost the crucial central part: Learning.

A new archetype is needed. This new way of thinking will be built specifically for scale impact questions. It will probably demand less data, clearer information about who is doing what and why, and more regular checkpoints at which to pause, learn, and correct the course.

The new archetype will make evaluation more accessible and more useful, without letting go of rigor.

Listening and Learning

Community members engage in discussions after watching video documentaries screened by the Self Employed Women's Association in the Jadiba Nagar slum. (Ahmedabad, India, 2010)

Photo: Bill & Melinda Gates Foundation / Prashant Panjiar

Pessimism

Scale can be big.
Scale can be small, too

It's liberating to think that scale can be big, such as improving health for millions or billions of the world's inhabitants, and it can also be small, such as improving the health of every potential beneficiary in a single community.

The idea that millions of children die from preventable illnesses immediately draws our minds to the vast scope of the challenge. But a chain of many small successes will deliver similar ends – achieving an impact for all children in this community, and then the next, and the next.

Just this village

A nurse midwife at the Loni Community Health Center shows doctors the register of all the pregnant women in a village on the outskirts of Delhi. (Uttar Pradesh, India, 2009)

Photo: Bill & Melinda Gates Foundation / Sanjit Das

Optimism

Passion is a substance that ebbs and flows

Most scale impact success stories involve remarkable people, passionate and able. Their skills and dedication are invested in the task of optimizing the innovation.

But scale-up efforts that rely on individual passion are likely to fail. By its very nature, impact at scale involves people whose effort must be spent, at least in part, on the not-so-simple tasks of making ends meet, feeding their families, and enduring the drudgery of daily bureaucracy.

Since any scale story will be long, many of the protagonists will have times when they are passionate and times when they are drained. Periods of focus and achievement are followed by days of detachment, demotivation, and treading water.

Some days are tired days

A young girl sleeps under an insecticide-treated net to guard against malaria. (Jendele Village, Tanzania, 2009)

Photo: Bill & Melinda Gates Foundation / Emily Simon

Pessimism

There is a difference between *diffusion* and *dissemination*

There is a difference between active efforts to encourage people to take up an innovation, which is the process of dissemination – and the uncontrolled spread of the innovation that continues well after the initial impetus is over, which is diffusion.

At the outset, efforts to scale impact will generally push an innovation in the hope that it will be adopted. But this calls for resources of time and money, and risks that the consumer will come to resent and resist the interference.

The long-term goal, then, is to move from the push of dissemination to the pull of diffusion: to generate a demand for the innovation that its initiators can neither predict nor control.

When the catalysts give up the comfortable control of the dissemination stage and allow the innovation to enter the wild world of diffusion – only then does the innovation belong fully to the people it is intended to help. Only then can scale occur.
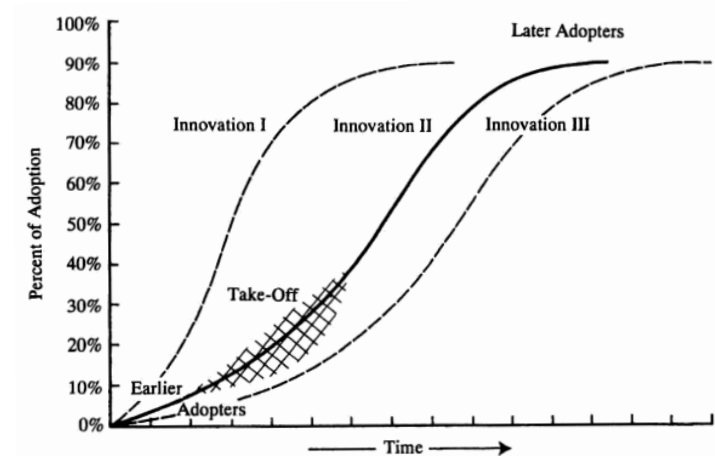
The S-curve of diffusion

In 1962, sociologist Everett Rogers set out the ideas of "dissemination" and "diffusion." The S-curve predicts how an innovation proceeds from a trickle of early adopters, to a flood of mainstream users, until only a few laggards remain.

Image: Everett M. Rogers. 2003[1962]. Diffusion of Innovations, 5th Ed. New York: Free Press.

State of the art

What happens when the S-curve changes shape?

Everett Rogers' S-curve is a bedrock of dissemination science. It shows how the speed with which innovations are adopted depends on early and later adopters – a simple pattern that still applies 50 years after Rogers coined the idea.

But innovations catch on in other patterns, too. To explain the trajectory of new technologies, the IT research company Gartner charted the "hype cycle": after a product fails to meet consumers' initial aspirations, it slides into the "trough of disillusionment" before settling into more moderate expectations on the "plateau of productivity."

And there are more patterns, like "Moore's chasm," similar to Rogers' S-curve but with a gap between the early adopters and the majority; or the "Van de Ven model," with its messy, non-linear shocks and setbacks, which seems intuitively correct for a lot of global health innovations.
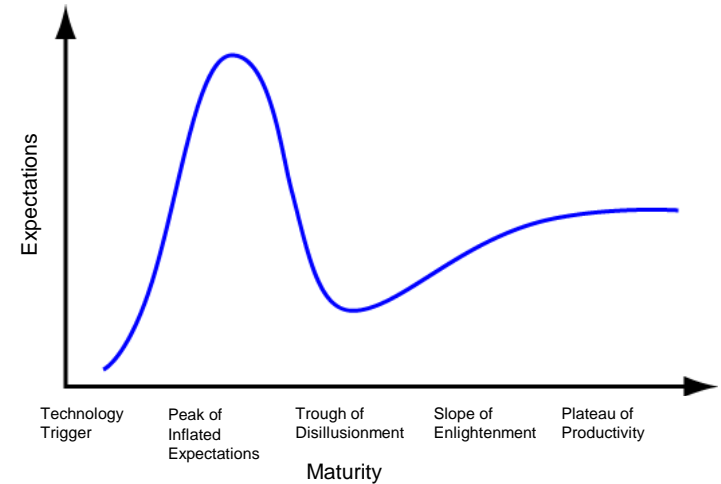
The hype cycle

What happens when a much-heralded new innovation fails to catch on as fast as the early enthusiasm predicts? According to the hype cycle, this may be a typical stage in the growth of a new product, not a sign of failure.

Image: Adapted from gartner.com.

State of the art

If something is going to scale, the catalyst has to let go

We seldom plan to devolve innovations as we should. Perhaps this is not surprising: catalysts often care deeply about the innovation; they try to nurture and guide it; their investment can be deeply personal.

But at a certain point, personal involvement is no longer helpful. I might convince my friend to stop smoking. Maybe if I got good at it, I could convince others. But if I want to persuade the 46 million US citizens or the 400 million Indians who currently smoke, I am going to have to think of a method in which my role fades forgotten into anonymity.

Two of the 400 million

A couple enjoy a beedi at sunset at the Pushkar Camel Fair. They are among the approximately 400 million Indians who smoke – a number that means that personal persuasion against smoking can only go so far. (Rajasthan, India, 2009)

Photo: Shreyans Bhansali

Pessimism

Make a place for insider-outsiders

At every stage in the journey from innovation to scaled impact, there exists a place for "insider-outsiders." These are often people who work for a catalyst (a funder, an intermediary, or a lead organization in the delivery system), but who operate in a local context (supporting systems, training delivery organizations, or mobilizing community user groups).

In addition to acting as a go-between and translator of ideas for agents in the supply chain, an insider-outsider develops a mastery of the contrasting cultures and contexts that have to fit if impact is to be scaled.

US agricultural extension agents are an excellent example of the insider-outsider role, connecting university science to farmers seeking better yields.

Brokers of culture and ideas

Jane Otai, a health advisor at Jhpiego, an international non-profit associated with Johns Hopkins University, has a discussion with community health worker Noria Issak while walking through the Korogocho slum. (Nairobi, Kenya, 2009)

Photo: Bill & Melinda Gates Foundation / Olivier Asselin

Top 10

Sometimes you need to play a little jazz

It's nice to start scaling impact with a well-worked-out score, clear lines of music for every section of the orchestra, a good conductor, and good conditions in which to perform.

But as with the best music, the strongest impact can come from an unexpected interpretation from the maestro or an improvisation on a theme. Scale experts sometimes talk about "playing jazz": working from a strong, well-informed, broadly-supported plan, but learning from many traditions and feeling free to riff on the original strategy.

Prepared to be spontaneous

An improvisation may be made up on the spot, but a successful one is grounded in years of practice. Here, a trumpeter plays at the Louisiana Jazz Festival.

Inspiration

Collaboration doesn't have to be altruistic

It's nice to collaborate. It's good to be sociable and it's only polite to listen to others' ideas and concerns. But the goals and processes of collaboration don't have to be purely altruistic. Perhaps the reason I listen to you so intently is partly selfish: I want to use your good ideas, and the solutions to your concerns, in my context.

One common source of innovation is the transfer of creative ideas from one puzzle to another. Sociologist Brian Uzzi has pointed out that the top Broadway shows are those that introduce a group of newcomers to a group who have worked together before. Maybe the comfort and trust supplied by the old members are balanced by the challenge and creativity supplied by the newcomers – and the result of the new collaboration is success.

Talking to you about your challenges helps me address mine.

Best of Broadway

Bringing together newcomers and old hands tends to create the most successful productions – in collaborations that are effective, if not necessarily altruistic.

Photo: www.broadway.me / Mark Runyon

Optimism

People respond to stories more than they respond to statistics

There is a vital role for science in working out what impacts can be scaled, and how they can be scaled. We need the best quantitative methods that can be devised, applied with care and expertise to the best data that can be collected.

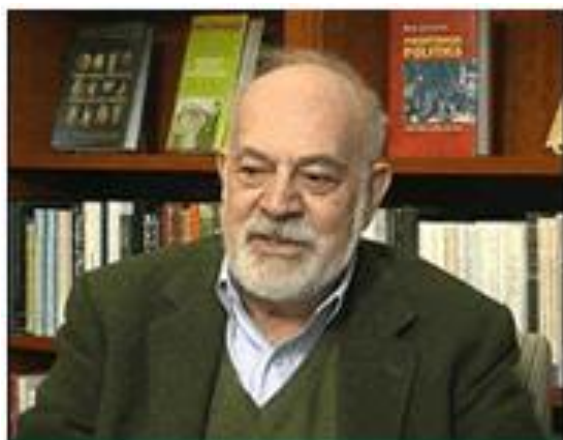But we also need to know the limits of our numbers.

Numbers have less power to change the behavior of children, families, and the people who support them than well-told stories about real-life situations. To change people's hearts as well as their minds, we need to tell the stories that capture the emotions in which their health choices are entangled.

Would you be more careful if it was you that got pregnant?

Emotional impact for family planning

It was 1970 when designer Jeremy Sinclair, at the advertising agency Cramer Saatchi, created the "pregnant man" poster for the UK's Health Education Council. It aimed to tell a story that men would recognize.

Advertisement: Jeremy Sinclair

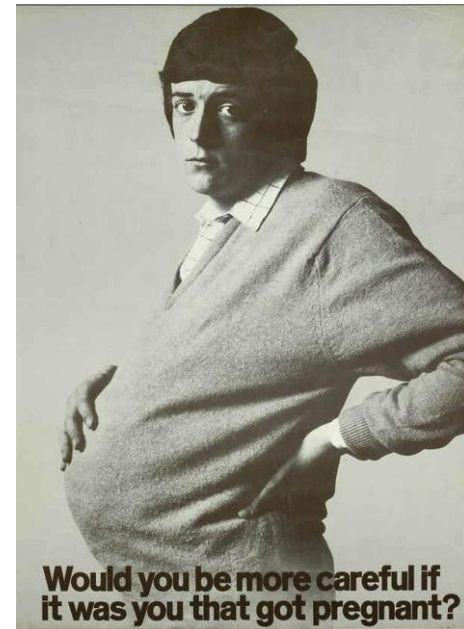**Top 10**

ON BULLSHIT

Harry G. Frankfurt

People respond to stories more than they respond to statistics

There is a vital role for science in working out what impacts can be scaled, and how they can be scaled. We need the best quantitative methods that can be devised, applied with care and expertise to the best data that can be collected.

But we also need to know the limits of our numbers.

Numbers have less power to change the behavior of children, families, and the people who support them than well-told stories about real-life situations. To change people's hearts as well as their minds, we need to tell the stories that capture the emotions in which their health choices are entangled.

Would you be more careful if it was you that got pregnant?

Emotional impact for family planning

It was 1970 when designer Jeremy Sinclair, at the advertising agency Cramer Saatchi, created the "pregnant man" poster for the UK's Health Education Council. It aimed to tell a story that men would recognize.

Advertisement: Jeremy Sinclair

Top 10

DESIGNING PRODUCT TO IMPROVE OUTCOMES

DESIGNING PRODUCT TO IMPROVE OUTCOMES

SYSTEM READY
OR
DIRECT TO FAMILIES
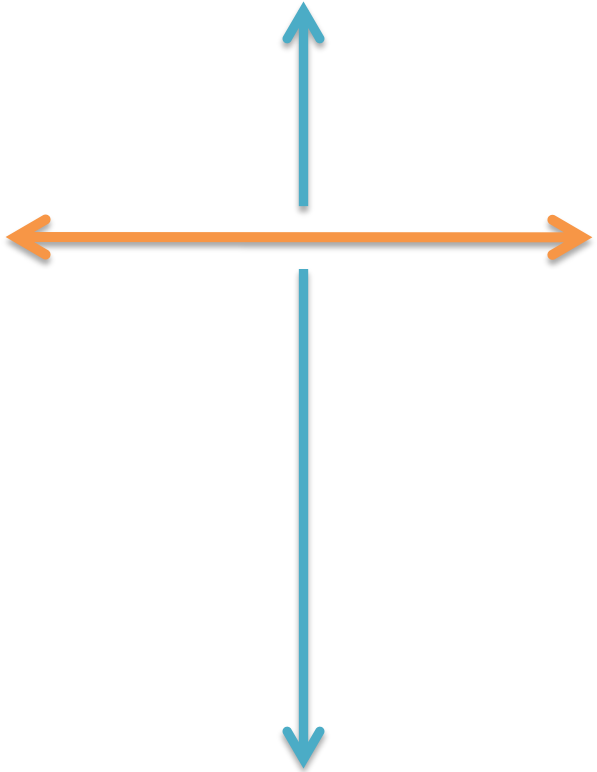
Conference Themes

- Build a shared understanding of implementation: terms, concepts theories
- Designing policies with implementation in mind
- Selecting policies and programmes that work in the real world
- Barriers to effective implementation
- Applying implementation principles and processes in policy and practice
- Evaluating implementation effectiveness

PREVENTION ACTION

LATEST

Is Canadian Index the key to standard child development measures?

30 October 2007 | Prevention News
Designed in Ontario, rebuilt and tested in Australia and beginning to attract the attention of policy makers in Europe and the US, the Early Development Index seems to offer a relatively simple route to trustworthy community-level epidemiology.

▶ More

Kids, science, communities – can they prosper together?

23 October 2007 | Prevention News
PRC's Daniel Perkins and Brian Bumbarger outline the encouraging first results of evaluating their community-driven PROSPER program in Iowa and Pennsylvania.

▶ More

How Penn State has written a strategy for effective intervention

22 October 2007 | Prevention News
In the space of a single decade, Penn State's Prevention Research Center's approach to science-based community empowerment has put it in the vanguard of efforts to make a seamless connection between prevention science, policy and practice.

Two connected stories continue our feature on the progress of Australian prevention science: a profile of **Fiona Stanley** (pictured here during a photocall with a few of the children whose needs and rights she has spent her brilliant career campaigning for), and, on the Prevention News page, more about a successful trial of her Australian variant of the Canadian-born **Early Development Index**.

The Treasure who's pushing Australia toward its children's

▶ **UPCOMING EVENTS**

BLUEPRINTS CONFERENCE 2008

17 Mar 2008 – 19 Mar 2008
Denver, Colorado, USA

▶ **RECENT BLOGS**

- Lead me by the elbow, please!

michael.little@dartington.org.uk

www.dartington.org.uk

www.preventionaction.org