

RICHARD BUSULWA
NAOMI BIRDTHISTLE
STEVE DUNN

STARTUP ACCELERATORS



A FIELD GUIDE

WILEY

Startup Accelerators

Startup Accelerators

A FIELD GUIDE

**Richard Busulwa
Naomi Birdthistle
Steve Dunn**

WILEY

© 2020 by Richard Busulwa, Naomi Birdthistle, and Steve Dunn.

Published by John Wiley & Sons, Inc., Hoboken, New Jersey.

Published simultaneously in Canada.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning, or otherwise, except as permitted under Section 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 646-8600, or on the Web at www.copyright.com. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, (201) 748-6011, fax (201) 748-6008, or online at www.wiley.com/go/permissions.

Limit of Liability/Disclaimer of Warranty: While the publisher and author have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives or written sales materials. The advice and strategies contained herein may not be suitable for your situation. You should consult with a professional where appropriate. Neither the publisher nor author shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages.

For general information on our other products and services or for technical support, please contact our Customer Care Department within the United States at (800) 762-2974, outside the United States at (317) 572-3993, or fax (317) 572-4002.

Wiley publishes in a variety of print and electronic formats and by print-on-demand. Some material included with standard print versions of this book may not be included in e-books or in print-on-demand. If this book refers to media such as a CD or DVD that is not included in the version you purchased, you may download this material at <http://booksupport.wiley.com>. For more information about Wiley products, visit www.wiley.com.

Library of Congress Cataloging-in-Publication Data:

Names: Busulwa, Richard, 1980- author. | Birdthistle, Naomi, author. |
Dunn, Steve, author.

Title: Startup accelerators : a field guide / Richard Busulwa, Naomi
Birdthistle, and Steve Dunn.

Description: Hoboken, New Jersey : John Wiley & Sons, Inc., [2020] |
Includes index.

Identifiers: LCCN 2019047697 (print) | LCCN 2019047698 (ebook) | ISBN
9781119638599 (hardback) | ISBN 9781119638650 (adobe pdf) | ISBN
9781119638605 (epub)

Subjects: LCSH: New business enterprises. | Entrepreneurship.

Classification: LCC HD62.5 .B878 2020 (print) | LCC HD62.5 (ebook) | DDC
658.1/1—dc23

LC record available at <https://lcn.loc.gov/2019047697>

LC ebook record available at <https://lcn.loc.gov/2019047698>

Cover Design: Wiley

Cover Image: © Rusty86/Getty Images

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

Contents

About the Authors	ix
Acknowledgments	xi
Preface	xiii
Introduction	1
Chapter 1: The Emergence of Startup Accelerators	23
Emergence	23
Ascendance	24
Expansion	28
Impact	30
Future	32
Chapter 2: What Happens in an Accelerator	37
Accelerator Programs	37
Accelerator Curriculums	38
Accelerator Co-Working Spaces	39
Accelerator Mentors	40
Accelerator Program Managers	42
Accelerator Weekly Check-In Sessions	46
Accelerator Advisors	47
Demo Day	50
Case Study 1: LEAPIN Digital Keys and the H-Farm Deutsche Bank IoT Accelerator Program (Italy)	54

Chapter 3:	Is Your Startup Ready for an Accelerator?	65
	What It Takes to Get into an Accelerator	65
	Accelerator Acceptance Criteria	66
	Common Accelerator Turnoffs	78
	When Are You Ready for an Accelerator?	87
	Can You Be Too Early or Too Late for an Accelerator?	88
	What If You Are Not Ready?	89
	Case Study 2: BroZone Inc. and the Founders Frontier Accelerator (USA)	90
Chapter 4:	How to Prepare the Accelerator Application	103
	Accelerator Acceptance Criteria versus the Accelerator Application	103
	The Accelerator Application Process	104
	The Accelerator Application Questionnaire	106
	Company Overview	109
	The Founders/Team	112
	The Product/Idea	120
	Progress	131
	Equity	136
	Other Common Accelerator-Specific Criteria	137
	How Accelerator Applications Are Evaluated	139
	Case Study 3: LEAPIN Digital Keys' Journey through Three Different Accelerator Applications (Italy, United States, and Germany)	141
Chapter 5:	How to Handle the Accelerator Interview	169
	What Is an Accelerator Interview and Why Is It Important?	169
	The Interview Process and Interview Questions	170
	Accelerator Interview Questions	173
	What Can Go Wrong in the Accelerator Interview	175
	Common Tips and Traps	176
	Case Study 4: Listen Notes' Y Combinator Interview (USA)	186
Chapter 6:	Should You Give Up Equity to Get into an Accelerator?	193
	Equity as a Prerequisite to Getting into an Accelerator	193
	What Else Do Founders Give Up in Accelerator Term Sheets?	197
	Case Study 5: Impact of Signing Multiple Accelerator Agreements on a Startup's Capital-Raising Rounds	204

Chapter 7:	Choosing an Accelerator Program	215
	Significance of the Decision to Participate in or Forgo Accelerator Programs	215
	Significance of the Accelerator Choice Decision	216
	What Makes Choosing an Accelerator So Challenging	218
	What Makes a Good Accelerator	220
	What Makes an Accelerator Right for a Startup	229
	How to Choose the Right Accelerator	231
	Case Study 6: An Unexpected Accelerator Experience	235
Chapter 8:	How to Get the Most out of an Accelerator	245
	Plan Ahead	245
	Clarify Priorities and Plan Your Time	246
	Show That You Are Committed	247
	Go Fast	248
	Get Customer Discovery and Customer Validation Right	249
	Get Strategy Right	250
	Get Legal Right	250
	Get Investment Ready or Raise Investment	251
	Perfect Your Pitching, Storytelling, and Business Communication	252
	Building Your Network within the Network	252
	Resolve Any Difficult Issues	253
	Maximize Learning	254
	Case Study 7: One Co-Founder's Approach to Making the Most of the Techstars Accelerator Experience	255
Chapter 9:	What to Expect after the Accelerator Ends	261
	What Happens after the Accelerator Ends	261
	The Need to Maintain Momentum	262
	What to Do after the Accelerator	262
Appendix:	Founder Resource Directory	269
	Resource Directory Overview	269
	Part 1: Founder Reflections	270
	Founder Reflection #1	270
	Founder Reflection #2	275
	Founder Reflection #3	278

viii **Contents**

Additional Founder Reflections	282
Part 2: Accelerator Program Manager and Entrepreneurship Educator Reflections	283
Accelerator Program Manager Reflection #1	284
Accelerator Program Manager Reflection #2	287
Entrepreneurship Educator Reflection #1	290
Entrepreneurship Educator Reflection #2	295
Part 3: Curated Accelerator Resources	297
Resources to Help Founders Choose the Right Accelerator	297
Resources to Help Founders Prepare Accelerator Applications and Plan for the Start of an Accelerator	297
Resources to Help Founders Navigate Key Stages of the Accelerator Experience	299
Examples of Leading Accelerators Globally by Region	328
Index	329

About the Authors

Richard Busulwa (PhD, MBA, MInnov) is a researcher in the Business School at Swinburne University of Technology, home to the Australian Graduate School of Entrepreneurship. His entrepreneurship research focuses on startup evolution, entrepreneurial learning, entrepreneurial well-being, and strategy for startups. He is co-author of *Strategy Execution and Complexity: Thriving in the Era of Disruption*. Richard is a startup co-founder and seed investor in cloud, IoT, AI, blockchain, property, and niche professional service firms.

Naomi Birdthistle (PhD, MSc, BA) is an associate professor of entrepreneurship at Griffith University and visiting professor at Alto University. Naomi has published research on entrepreneurship education, entrepreneurial ecosystems, and high-growth firms. Her research has received numerous awards including Emerald Literati, Ernst & Young Entrepreneur of the Year, and the Institute of Small Business and Entrepreneurship (ISBE) and Ireland's Network of Teachers and Researchers of Entrepreneurship (INTRE) awards.

Steve Dunn (MBA, BA) is CEO and co-founder of LEAPIN Digital Keys, a startup that delivers NB IoT smart access control solutions. Since its founding, Steve has led the startup through a number of different accelerators within Asia Pacific, the United States, and Europe. He has also led the startup through several iterations and pivots with a variety of IoT technologies, to finally find product/market fit. Steve is a mentor and coach in university-based accelerators and incubators.

Acknowledgments

We are thankful to the founders, program managers, and entrepreneurship academics who took time out of their busy schedules to answer our lengthy questionnaires and interview questions in detail, and with full openness. We are also grateful to our supportive family and friends for accommodating our late nights and weekends spent researching and writing. Finally, we are grateful to Bill Falloon and the team at Wiley for providing us with the opportunity to research and write this book, as well as for being easy to work with and having author-friendly terms.

Preface

Accelerator programs have emerged as one of the most powerful vehicles for helping entrepreneurs to learn rapidly, create powerful networks, raise money, build their startups, and do this at speed and at scale. Since Y Combinator brought accelerators into the public consciousness in 2005, the number of accelerator programs have exploded around the world; spawning successes such as Airbnb, DropBox, Reddit, Stripe, Zenefits, Pillpack and Uber—many with billion-dollar valuations. But the number of accelerators, the global catchment area of accelerators, and differences in the benefits and costs of different startup ecosystems around the world make choosing the right accelerator a challenge. Choosing the wrong accelerator can be costly, as can failing to get into the right one. With the stakes so high, entrepreneurs need to consider their options carefully. Getting into the right accelerator is also no easy feat, since many of the best accelerators have very low acceptance rates. Once in an accelerator, founders need to take care to make the most of what the accelerator has to offer; and to ensure they don't neglect their business operations while in the accelerator. Written by entrepreneurs for entrepreneurs, this book provides entrepreneurs with an insider look into the inner workings of different accelerator programs around the world. It outlines how accelerators help startups, what the different startup accelerators around the world offer, what it takes to get into them, how to prepare accelerator applications, what to do during accelerator programs, how to raise money during accelerators, and what to do after an accelerator program ends.

The book is a one-stop resource packed with insightful data and the real-life case studies and reflections of startups going through accelerator programs, program managers operating accelerator programs, entrepreneurship educators teaching entrepreneurship, and entrepreneurship researchers researching entrepreneurship education. While the book is designed to efficiently provide entrepreneurs with critical information they need on accelerators, it is also an insightful read for accelerator program managers, entrepreneurship educators, entrepreneurship education researchers, and investors considering investment in a company coming out of an accelerator; as well as policy makers seeking to unpack the role of accelerators in the entrepreneurial journey and in entrepreneurial ecosystems.

Startups are usually pursuing opaque opportunities with closing time windows and fleeting entry points. Yet there is often an avalanche of work that must be done in order to seize the opportunity. Therefore, it is imperative that they limit how much time they waste on potential time vacuums such as engaging with the wrong type of startup support institution for a particular startup evolution stage, engaging with the wrong types of coaches/consultants/startup networks, spending time on trivial activities at the expense of critical ones, engaging in avoidable trial-and-error activities, reviewing unnecessary startup information, developing unnecessary startup know-how, accessing necessary startup information—but at the wrong time, and engaging in avoidable rework. Now more than ever, there is a proliferation of information and institutions offering support to startups—this trend is only expected to amplify. The startups likely to make it simply don't have the time to siphon through and decipher all the information on the different types of institutions supporting startups, the networks of those institutions, the offerings of those institutions, and the benefits and shortcomings of their offerings. Should startup founders undertake this arduous task with reliable rigor, within each institution type there is a proliferation of offerings. The aim of our book is to unpack the accelerator institution for entrepreneurs in a structured, simple, practical, yet rigorous way. In doing so, we hope to save entrepreneurs the costs of misunderstanding accelerators, using them in the wrong way, missing out on their key benefits, going through poor quality accelerators, or choosing accelerators not optimally suited to their particular startup.

Research for This Book

The research for this book was undertaken in five stages. In stage 1, we undertook a review of the relevant and seminal academic research on startup accelerators, incubators, and other entrepreneurial ecosystem institutions. The purpose of this stage was to understand the unique role startup accelerators play in entrepreneurial ecosystems, their unique value to entrepreneurs, and the stages of the startup evolution process at which accelerators are of most value. In stage 2, we reviewed key practitioner literature on startup accelerators—focusing on the value offerings of different accelerators, their functioning, and achievements. The aim of this stage was to understand the unpacked value offering, functioning, and effectiveness of different types of startup accelerators. In stage 3, we undertook a comprehensive review of primary and secondary data on accelerator programs in general, and the different startup accelerators around the world in particular. In this review, we focused on the prevalence and verifiable effectiveness of accelerator programs. In stage 4, we drew on our experience, personally applying for and entering a number of different accelerators, incubators, and government startup support programs in different parts of the world. Through this fourth stage, we drew on first-hand experience of what it takes to get into accelerators, and to make the most of them—both during and after the program. Finally, in stage 5, we collected primary and secondary data on the experiences and reflections of founders going through different accelerator programs, around the world, program managers operating different accelerators programs and university entrepreneurship educators teaching entrepreneurship and researching entrepreneurship education (in particular, regarding the latter, we focused on educators at universities teaching entrepreneurship programs and operating accelerator programs).

How to Use This Book

This book is made up of nine chapters which can be viewed as six parts. Part 1 (Introduction and Chapter 1) explores the driving need, emergence, and ascendance of the accelerator phenomenon. This part will be of value to founders and aspiring founders, as it unpacks the key startup evolution stages and the challenges faced by

founders along those stages. Part 1 will be of value to entrepreneurship educators, entrepreneurship ecosystem researchers, and policy makers as it unpacks the value of accelerators to startup journeys and therefore the role of accelerators in entrepreneurial ecosystems. Part 2 (Chapters 2–4) discusses what happens in an accelerator, how to know if a startup is ready for an accelerator, and how to prepare the accelerator application. Part 3 (Chapters 5–7) discusses how to choose an accelerator, how to handle the accelerator interview, and whether to give up equity to get into an accelerator. Part 4 (Chapters 8–9) discusses how to get the most out of an accelerator, what to expect after the accelerator, and what to do after the accelerator ends. Part 5 (Appendices) is a resource directory organized into three subparts. The first subpart provides case study reflections of the experiences of founders who have been through accelerator programs. Subpart 2 provides case study reflections of accelerator program managers who operate accelerator programs and university entrepreneurship educators who teach entrepreneurship and research entrepreneurship education. We hope these three very different reflections offer insight into the thinking and challenges faced by these accelerator institution and entrepreneurship education stakeholders. We chose to make these reflections anonymous, so participants could be fully honest, without risking their reputations or those of their organizations. Finally, in subpart 3 we have curated key resources that founders can draw on for different aspects of the accelerator experience. For example, they can find curated information for evaluating accelerators, for navigating different aspects of the accelerator process (e.g., preparing accelerator applications, preparing for interviews, starting the accelerator, networking, preparing for demo day, etc.). They can also find curated tips and advice from a range of founders who have gone through accelerators on how to approach almost all aspects of the accelerator experience. Finally, for each region of the world (Asia, North America, Europe, Africa/Middle East, South America, Oceania), we list some of the most popular accelerators, their focus, and their notable alumni startups.

The book is organized to enable efficient access to relevant information as and when needed. Thus, for example, a reader attempting to prepare an accelerator application can scan the table of contents to find Chapter 4 and go straight to that chapter. Or, for example again, a reader can scan the table of contents to locate where in

the book they can find the top accelerators in their country, or the mentors in a particular accelerator. Each chapter is written to stand on its own and does not require a reader to first read the preceding chapters—although readers may benefit more from a cover-to-cover reading. At the end of most chapters, we provide a real-world case study of the chapter content in practice by a range of different founders in different accelerators around the world. For example, Chapter 4 on how to prepare the accelerator application provides case studies of the real-world applications of startups to different accelerators, and identifies those that got in and those that did not get in. Thus, a reader that finds reading theory difficult can go straight to the case study for that chapter to learn from the real-world case study. And if they have a query about a particular part of the case study, they can visit the specific theory section within that chapter. We have used endnotes to corroborate key assertions made in the book, and we encourage entrepreneurs to go to those sources for even deeper insights.

Introduction

In the startup world, you're either a genius or an idiot. You're never just an ordinary guy trying to get through the day.

Marc Andreessen, co-founder, Andreessen Horowitz

For every Facebook, WhatsApp, or Airbnb, a staggering number of startups don't make it. If we define "making it" as mere survival, rather than reaching the soaring heights of a Facebook or Airbnb, the numbers are still sobering. For example, up to 20% of startups don't survive the first year alone.^{1,2} Up to 50% are no longer alive by year 5, and up to 90% ultimately fail.^{3,4,5} If we define "making it" as achieving the level of success of a Facebook or Airbnb, the number of startups that don't make it grows dramatically. Consider, for instance, how many Facebooks emerge out of more than 6 million entrepreneurs that start a new business in the United States every year.⁶ Or consider that top venture capitalists, whose specialist job is identifying and backing the most promising companies, only invest in about 20 of every 3,000 startups they evaluate.⁷ And consider that out of these 20, only one or two ultimately earn the majority of the money that venture capital firms earn in return.⁸ Irrespective of the definition of success used, the startups that make it often do so against the odds. There is a proliferation of often conflicting opinions on why this is the case; and a number of researchers and practitioners have identified different challenges, dilemmas, and pitfalls faced by startups. Melissa Cardon, a University of Tennessee professor, found that failures among entrepreneurs were commonly blamed on the mistakes and or misfortunes made and or experienced by them.⁹ These range from having a product with no market need, running out of cash, not

having the right team, being blindsided or outdone by competitors, getting pricing wrong, poor marketing, not listening to customers, losing focus, conflicts within the founding team or with investors, failure to make the right pivots, mismanaging geographic expansion, growing too fast, failing to attract sufficient funding, getting into legal trouble, not effectively using a support network, lacking sufficient passion, and burnout of founding team members.¹⁰ And this list is just the tip of the iceberg. Startup accelerators help startups deal with many of these issues. Before we explore just how they help startups deal with these issues, it is important to first unpack the stages a startup evolves through—so we can better understand when it may face particular challenges, dilemmas, or pitfalls. This will help clarify what stages of a startup’s evolution accelerators are of most value to founders and exactly how they are of value (see Figure I.1).

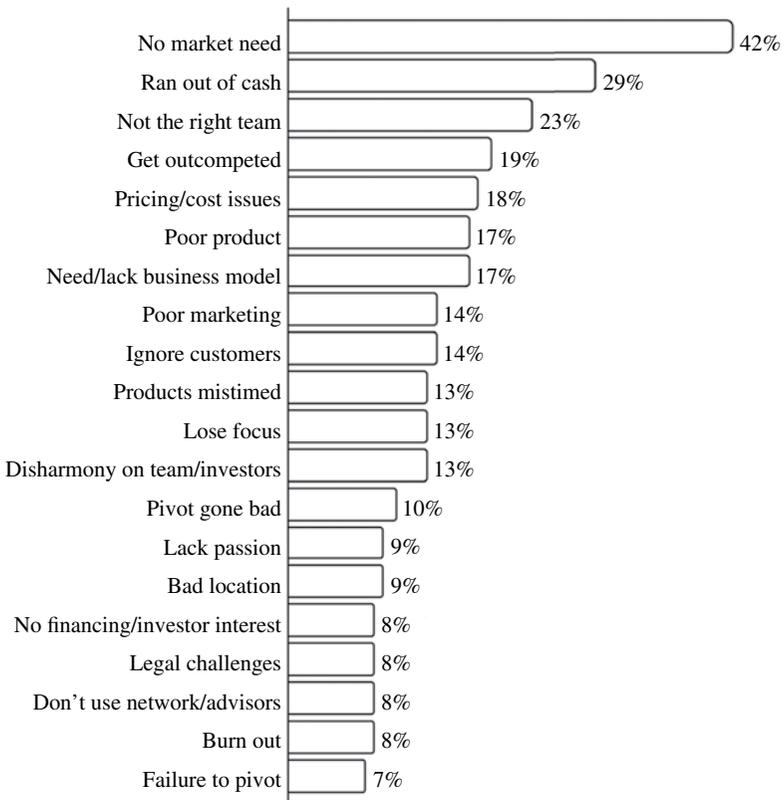


FIGURE I.1 Common Causes of Startup Failure and Their Prevalence

Source: Adapted from Sweetwood (2018).¹¹

The Stages of Startup Evolution

Several researchers, entrepreneurs, and investors have unpacked, framed, and reframed the obstacles and dilemmas faced by startups to get more granular about the underlying causes; or to organize the avalanche of information about these obstacles into meaningful formats that entrepreneurs or other stakeholders within startup ecosystems can digest easily. For example, University of Southern California entrepreneurship professor and former Harvard Business School associate professor Noam Wasserman framed some of these challenges as prefounding dilemmas, founding dilemmas, and exit dilemmas.¹² Prior to founding, entrepreneurs need to know when it is right to found a startup. If they found too early, they may not have enough relevant skills, knowledge, and resources; or the market may not yet be ready for their ideas. This may result in inadvertently placing the startup in checkmate, before it has even really begun. But on the other hand, if they wait too long they may find themselves unfit for founder life, handcuffed by career and family issues. Or they may find that someone else has already seized their ideas. Once entrepreneurs decide to found a startup, they have to decide whether to have co-founders or not, who to bring on as co-founders, and how to split equity in the startup.¹³ Wasserman argues that getting these early decisions wrong can result in perverse incentives and disincentives, irreconcilable friction between co-founders, or the eventual inability to raise funding—making subsequent efforts to build the startup moot. If entrepreneurs get these early decisions right, they face challenges making the right first hires and incentivizing them appropriately, so they don't become problem employees or engage in actions that undermine the startup. On the one hand, entrepreneurs want to attract professional, high-skilled employees—yet they are not able to offer the pay levels, professional management, or other intangibles offered by established brands. On the other hand, if they hire unprofessional or low-skilled employees at low pay, they may doom their startup to mediocrity or sloth. While these co-founder and employee issues may rarely be mentioned as obstacles, Noam Wasserman found that such people issues account for up to 65% of startup failures.¹⁴ At some point, the startup may need external finance, and face dilemmas such as whether to raise capital early but give up a lot of equity and control; or whether to wait, give up less equity and control, but risk failure in the meantime.

While Wasserman explores the challenges startup founders face from a pre-founding dilemmas, founding dilemmas, and exit dilemmas perspective, Andreessen Horowitz partner and Netscape co-founder Marc Andreessen explores the challenges from a before product/market fit (BPMFT) and after product/market fit (APMFT) perspective.¹⁵ Defining product/market fit as being in a great market with a product that can sustainably satisfy that market, he argues that the only thing that matters for BPMFT startups is finding a great market, and a product that can sustainably satisfy that market. Except in rare cases, spending time on any other challenge is most likely a waste of valuable time and resources. That is, before product/market fit, nonproduct/market fit challenges are not that important to making it as a startup. Which is not to say that they don't matter at all, but rather, that startups can screw up many of these things and still make it—as long as they succeed at finding product/market fit. In contrast, startups that screw up product/market fit are more often than not doomed to failure—no matter how well they succeed at other things. Andreessen cites numerous examples of companies that have built seemingly great teams, raised money from top tier VCs, got all the legal right, listed on prestigious stock exchanges, and looked slick in every way—only to come crashing down, because they did not take the time to get the product right and the market right. U.S. healthcare technology startup Theranos Inc. is a good case in point. Theranos Inc. was heralded by the media as having made a breakthrough in the \$70 billion diagnostic lab industry. It raised more than \$600 million from investors, assembled a stellar board and stellar strategic partners,¹⁶ and was valued at over \$10 billion. By most accounts, it looked like the epitome of a successful startup—only to end in insolvency and fraud and conspiracy charges, when it was subsequently discovered that Theranos' product could not do for customers what it purported to do. Theranos Inc. did not have product/market fit because, although it had a great market, it did not have a validated product that could truly satisfy that market—only the promise of such a product. Marc Andreessen's delineation of startup challenges into BPMFT and APMFT challenges is a critical one, as it provides important guidance for entrepreneurs about when particular challenges and dilemmas matter the most as a startup evolves.

Silicon Valley entrepreneur, investor, and Stanford adjunct professor Steve Blank unpacks Marc Andreessen's BPMFT and APMFT delineations, and frames startup challenges into four stages: Customer Discovery, Customer Validation, Customer Creation, and Company Building.^{17,18} In the Customer Discovery stage, there are three challenges. The first challenge is to validate that a big enough and painful enough problem exists for a large enough group of people, that a specific solution will solve that problem, and that the specific solution can solve the problem to such a degree that those people will buy it. The second challenge is to build a minimum viable product (MVP), or a minimum form of the complete product/service, that solves the problem. This MVP can then be tested on real-world customers in the target group. The target group may either love the MVP or provide valuable feedback about its shortcomings. This may lead to subsequent iterations of the MVP, and even to revising the original problem/solution fit assumptions. Finally, thorough interviews, surveys, usage analytics, and other approaches, the startup must identify its sales and marketing funnels. These are the key stages in the customer buying process and the activities that must be undertaken to move prospective customers through that process in a viable way. For example, a software startup may determine that the majority of its prospective customers go onto an online search engine to search for software, and that these prospective customers typically look at the top five search results within a specific software category, then check the credibility of companies developing that software and the existing customer feedback on that software, then check the pricing, and, finally, send through an email inquiry or pick up the phone and make an inquiry that may lead to a closed sale. Having discovered this buying process, the startup may configure its marketing and sales activities to ensure that it maximizes how many email or phone inquiries it receives and that it economically converts as many of those inquiries as possible into actual sales. In the process of mastering these first three challenges (validated problem/solution fit, the MVP, and sales and marketing funnels), the startup may find product/market fit. A startup has product/market fit when customers have tried its product, accepted the product, trust the product, and want more of the product (e.g., the product does the job well it purports to do, it can be trusted

to be of good quality, it can be delivered in a timely manner, it poses no risk to the organization, and it is of better value than competing and substitute products). In the Customer Validation stage, the proposed MVP, the sales and marketing roadmap and the business model are validated. Validation of the MVP involves understanding the core value the MVP provides to customers and confirming that customers are passionate about it. Validation of the sales and marketing road map involves understanding the relevant market and optimizing its conversion funnel from initial awareness of the product, to purchase of the product, to referral of the product to other customers. And validation of the business model involves proving that the relevant market can scale to sustain the business, and that the lifetime value of a customer exceeds the cost of serving that customer. In the Customer Creation stage, end user demand is created to scale sales. And in the Company Building stage, the company transitions from a startup focused on learning to a fully-fledged business.

Princeton University professor of entrepreneurial leadership and iSuppli founder Derek Lidow frames startup challenges into Customer Validation, Operational Validation, Financial Validation, and Self-Sustainability stages.¹⁹ Customer Validation is concerned with proving the product idea with potential customers, investors, employees, and others. At the end of this stage, startups will have a product that actual customers commit to buying repeatedly. In the operational validation stage, startups put in place the capabilities to find more customers, and to produce and deliver the product to these customers so as to truly satisfy them. For example, this may require ensuring the startup can be relied on to manufacture and deliver products to customers on time, to quality and service expectations, with easy payment and after-sales support services, and with minimal risks to customers. Once a startup has confirmed that customers want to buy its product on an ongoing basis and that it has the operational capabilities in place to get new customers, deliver the product to them, and do so in such a way as to satisfy them, it is ready for the third stage—financial validation. The objective of financial validation is to reconfigure or put in place processes that are flexible enough to handle significant growth and changes in demand, but with minimal financial and key person risk. Finally, in stage 4, startups put in place an effective innovation process. This process enables them to create a consistent stream of

new products and new customers that can replace customers and products that are no longer a source of profitability. For example, Amazon's first product was an online bookstore platform, but it since then put in place an innovation process that has delivered a consistent stream of products including Kindle, Amazon Web Services, Amazon Prime, Alexa, Amazon Publishing, Amazon Robotics, and many more.

Integrating and building on the insights from Noam Wasserman, Marc Andreessen, Steve Blank, and Derek Lidow, we propose that startups evolve through a six-stage iterative process as depicted in Figure I.2. Startups evolve from Insight/Opportunity Recognition

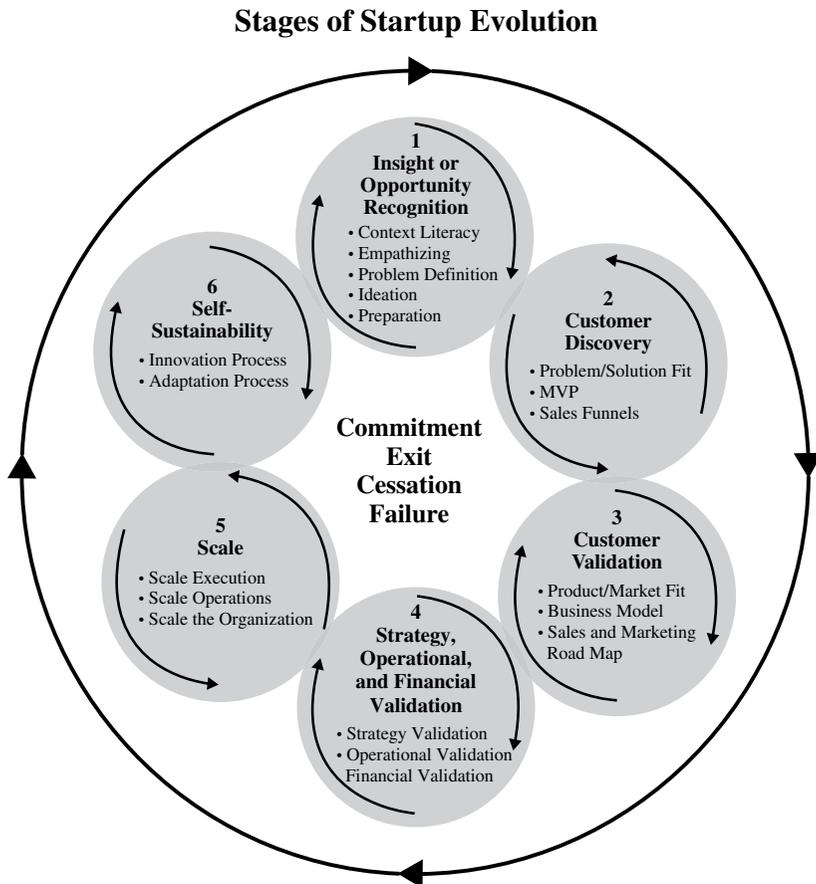


FIGURE I.2 The Six Stages of a Startup's Evolution

to Customer Discovery, then Customer Validation, then Strategy/Operational/Financial Validation, then Scaling, then finally, Self-Sustainability. Each stage is depicted as a continuous process of iteration to a minimum viable point, at which the startup can move onto the next stage.

The process in Figure I.2 does not suggest or imply that startup evolution is neat, linear, and sequential. Rather, startups can move forward once the minimum viable point of a stage is reached, or backwards if they discover that some of their earlier hypotheses and assumptions were incorrect. For instance, a startup may pivot by moving from Customer Validation back to Customer Discovery, in order to refine problem/solution fit and develop a different MVP. At any stage, startup founders may decide to maintain or escalate their time and other resource commitments (“Commitment”) or they can decide to de-escalate their commitment to the point of ceasing pursuit of the startup opportunity (“Cessation”). They may also make certain decisions or be subject to certain unfavorable external situations that lead to the startup being forced into discontinuing (“Failure”). For example, a startup may get into so much legal trouble that it is unable to disentangle itself in an economic way, so as to remain a going concern. Alternatively, the founders may exit the startup (“Exit”). For example, they may exit by selling their shares to existing shareholders or new investors, by having their startup acquired, or being forced out of the startup by other investors. A startup may eventually make its way through all the stages to self-sustainability and become an Amazon, Google, or Microsoft.

In Figure I.2, Steve Blank’s Customer Discovery and Customer Validation stages are incorporated as steps 2 and 3, with the objectives of each stage included as dot points. Figure I.2 shows that a startup can move from Customer Discovery to Customer Validation, and pivot back to Customer Discovery continuously, until it finds product/market fit. In incorporating these stages, Marc Andreessen’s BPMFT and APMFT insights are also implicitly incorporated.²⁰ Step 4 of the process incorporates Derek Lidow’s Operational Validation and Financial Validation stages.²¹ Based on our research, we have added Strategy Validation to reflect the importance of startups making validated strategic choices (e.g., see Joshua Gans, Erin Scott, and Scott Stern’s *Harvard Business Review*

article on strategy for startups)²² and ensuring they can execute those choices (e.g., see Richard Busulwa, Matthew Tice and Bruce Gurd's book on strategy execution and complexity).²³ Noam Wasserman's findings on prefounding, founding, and exit dilemmas²⁴ are reflected in step 1 and also in the center of the circle. In step 1, entrepreneurs need to build context literacy (e.g., domain/industry/market and product expertise), get an appreciation for customer issues and pain points, and clarify or better define customer or market problems to arrive at a product/service/solution insight or to recognize a startup opportunity. If they knew they wanted to become an entrepreneur prior to opportunity recognition, they may have already undertaken step 1 activities as part of their preparation for startup life. Alternatively, if the product/service idea is driving them into entrepreneurship, they may still need to go through preparation. It is in preparation that many of the prefounding dilemmas Wasserman identifies are resolved.²⁵ Step 1 also incorporates empathizing, defining, and ideation insights from design thinking²⁶—although these may occur tacitly or by chance for some entrepreneurs. Step 5 of the process incorporates Steve Blank^{27,28} and other entrepreneurs' insights into the process of scaling entrepreneurial ventures.²⁹ Finally, step 6 incorporates Derek Lidow's Self-Sustainability stage.³⁰ We drew on insights from organization adaptation research to also add the need for an effective adaptation process to maximize self-sustainability.³¹ That is, in addition to having an innovation process that can create a consistent stream of new products and new customers,³² self-sustainability requires having in place an adaptation process that can ensure the organization has the right capabilities and resources at the right time to respond to opportunities and threats in its external environment.^{33,34,35}

Having identified the stages startups evolve through, we can now categorize the challenges, dilemmas, and pitfalls startups go through by evolution stage. This will enable us to, then, consider at which stages startups may need accelerators, and how helpful accelerators can be to startups at these different stages. Table I.1 categorizes some of the earlier discussed startup challenges, dilemmas, and pitfalls by evolution stage. Knowing the key objectives and the key challenges, dilemmas, and pitfalls, we will be better positioned to discuss at which stages startups need the services

provided by startup accelerators and what specific objectives, challenges, dilemmas, and pitfalls accelerators address at those stages of startup evolution.

TABLE I.1 Example of Some of the Challenges, Dilemmas, and Pitfalls Startups Face Organized by Stage of a Startup's Evolution

Evolution Stage	Objectives	Example Challenges, Dilemmas, and Pitfalls Reframed as Questions
1. Insight or Opportunity Recognition	Finding an idea or problem worth pursuing. Being adequately prepared to pursue an idea or problem.	Is this an idea or problem worth pursuing? Is now the right time to pursue a startup, or should I (or we) wait? How do I (or we) know when I (or we) have sufficient skills, knowledge, and resources to be ready for startup? Will I (or we) miss the opportunity, or will I (or we) find myself (ourselves) handcuffed by career and family issues? Do I seek out co-founders now or go at it alone until a certain point? How should I (or we) approach early equity splits? Should I (or we) take on family/friend co-founders or not? When should I (or we) raise money and get investors on board? How do I (or we) do it? How much equity should I (or we) give away? How do I (or we) make sure we don't run out of money?
2. Customer Discovery	Finding problem/solution fit. Building the MVP Identifying and validating sales funnels.	Who should be the CEO of the startup? How do I (or we) test for and find problem/solution fit? How incomplete can my (our) MVP be? Will testing an incomplete product get my (our) startup a bad reputation? How much MVP feedback is enough? How many times should I (or we) iterate before throwing in the towel? What are sales funnels? How do I (or we) identify my (our) sales funnels? How do I (or we) know when I (or we) have got sales funnels right?

Evolution Stage	Objectives	Example Challenges, Dilemmas, and Pitfalls Reframed as Questions
3. Customer Validation	<p>Finding product/market fit.</p> <p>Validating the business model.</p> <p>Validating the sales and marketing roadmap</p>	<p>What is product/market fit?</p> <p>How do I (or we) find product/market fit?</p> <p>How do I (or we) know when I (or we) have product/market fit?</p> <p>What is a business model? How is a business model different from a revenue model, an operating model, or a strategy? How do I (or we) know when I (or we) have the right business model?</p> <p>What is a sales and marketing roadmap? How do I (or we) build the sales and marketing roadmap? How do I (or we) know if the conversion funnel is optimized?</p>
4. Strategy, Operational and Financial Validation	<p>Strategy validation.</p> <p>Operational validation.</p> <p>Financial validation</p>	<p>What is a strategy? Do startups need a strategy? How do I (or we) validate the strategy?</p> <p>How do I (or we) do operational and financial validation?</p> <p>What if I (or we) don't do strategy, operational, or financial validation?</p>
5. Scaling	<p>Scaling execution.</p> <p>Scaling operations.</p> <p>Scaling the organization</p>	<p>What is scaling? How do I (or we) know if my startup is ready to scale? What are the risks of scaling, and how do I (or we) manage them? Can I (or we) scale too early?</p> <p>How much money does it take to scale safely?</p> <p>What is the difference between scaling execution, scaling operations, and scaling the organization?</p>
6. Self-sustainability	<p>Implementing an effective Innovation Process.</p> <p>Implementing an effective Adaptation Process</p>	<p>How do we scale execution, scale operations, and scale the organization?</p> <p>Do startups need an innovation process? What makes an effective innovation process? How do we put in place an effective innovation process? How do we know if we have got the innovation process right?</p> <p>Why would we need an adaptation process? How do we put in place an adaptation process? How do we know if we have got the adaptation process right?</p>

How Accelerator Programs Can Help Startups

Startup accelerators are fixed-term educational and mentorship programs run for a cohort of early-stage, growth-driven companies to help them circumvent startup challenges, dilemmas, and pitfalls so as to improve their odds of making it.^{36,37,38} Accelerators compress years' worth of learning by doing insights into rapid, intense, and immersive learning programs of approximately three to six months.^{39,40,41} The aim of the programs is to accelerate the speed with which startups progresses through the stages of startup evolution, and to significantly improve their odds of ultimately making it. Although the benefits of accelerator programs differ from one accelerator to the next, our research revealed seven key benefits: accelerated evolution, accelerated learning/skills development, funding/investment readiness/fundraising, networks, professional business services, strategy, and ongoing advice/hands-on support. The first benefit, accelerated evolution, relates to the speed with which startups make progress while in the accelerator (and thus advance through one or more stages of startup evolution). The second benefit, accelerated learning/skills development, usually occurs through education/training delivery and coaching/mentoring elements built into accelerator curriculums. The third benefit, funding/investment readiness/fundraising, usually comprises one or more of the following: cash investments in cohort companies in exchange for equity, a living stipend for the period that founders are participating in the accelerator, helping startups understand and do what is required to be attractive to investors, and linking startups to a network of investors for potential future fundraising. The fourth benefit, networks, usually comprises access to the accelerator's network of investors, entrepreneurs, professional business service providers, specialist advisors, corporate partners, and other stakeholders. This network can be a great source of potential clients, potential strategic partners, potential investors, potential cofounders, potential employees, and a broad range of intangible opportunities. The fifth benefit, professional business services, is usually comprised of free or discounted access to accelerators' in-house business service providers such as legal advisors, business model strategists, corporate communication advisors, financial advisors, and many more. Startups that are not part of an accelerator might find the cost of such specialist professional services prohibitive—that's assuming they can

find such startup-focused specialist services to begin with. The sixth benefit, getting the strategy right, usually involves accelerators helping founders to think through and make the right short-, medium-, and long-term strategic choices. These choices may, for instance, involve issues such as should we spend all our money on having solid patents or just try to be first? Should we manufacture ourselves or should we license? Should we partner with distributors or do it ourselves? Should we choose a particular technology standard or hedge our bets?⁴² The seventh benefit, ongoing advice/hands-on support, involves ongoing access to the accelerator organizers and advisor networks for advice regarding any number of issues that might come up during or after the accelerator program. Sometimes entrepreneurs need a trusted advisor or a sounding board, particularly someone who has experience helping other startups to successfully get through a similar challenge. As well as the advice, accelerator organizers can sometimes roll up their sleeves and hold founders' hands to navigate them through particular challenges. Such challenges might include, for example, negotiating fundraising rounds, negotiating an acquisition deal, structuring a strategic partnership agreement, or going through a stock exchange listing process. Accelerator organizers will likely have been through these challenges with other cohort companies, and also have people who can offer hands-on help to founders, albeit this may come at a cost. Although not specifically articulated in the literature we reviewed, an additional theme coming from our case study interviews is the ability of accelerators to hone entrepreneurs' professionalism and confidence in dealing with prospective hires, investors, customers, strategic partners, the media, and other stakeholders. Figure I.3 depicts some of the key benefits of accelerator programs.

As well as there being diversity in the different types of accelerators, within each type of accelerator there can be a difference in focus. For example, there are noncorporate accelerators, corporate accelerators, government accelerators, NGO/NFP accelerators, and many others. Noncorporate accelerators usually follow the original Y Combinator accelerator model, offering the seven benefits discussed earlier in exchange for equity investment—although not all accelerators take equity. Corporate, government, NGO/NFP, and other accelerators are usually run by or on behalf of corporations, governments, and NGO/NFP organizations for a range of different strategic reasons. Such reasons can include stimulation of innovation,

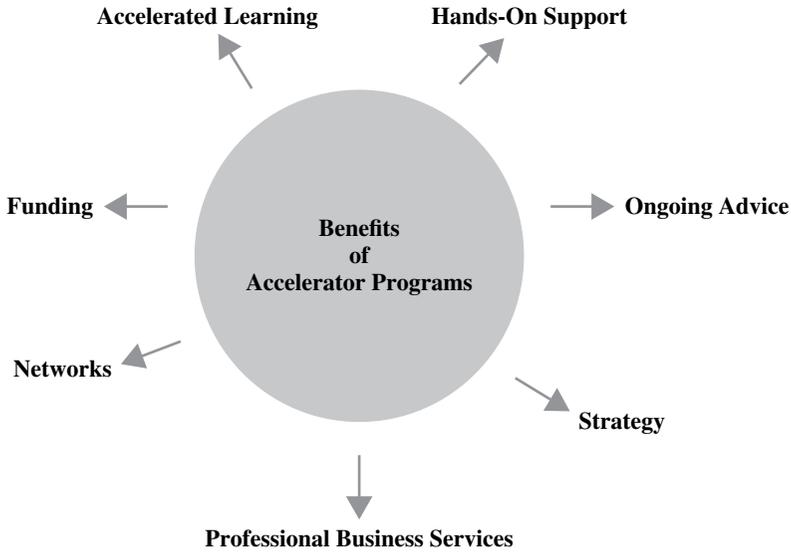


FIGURE I.3 Key Benefits of Accelerator Programs

finding a new competitive edge, learning commercialization skills, economic development, and many more. For example, there is a Barclay’s accelerator focusing on Fintech startups and a Comcast NBC Universal LIFT Labs Accelerator focusing on media startups. Within accelerator types, accelerators may focus on a particular industry, a particular part of the value chain, a particular technology, a particular stage of startup evolution, a particular customer segment, a combination of one or more of these areas, or another area altogether. While most startups are likely to choose noncorporate accelerators, a startup may participate in one of the other types of accelerators because those types of accelerators can give it the best access to particular types of clients, funding providers, strategic partners, acquisition opportunities, or other benefit it is seeking.

Accelerators versus Incubators, Investors, Government Programs, and Other Startup Ecosystem Institutions

Accelerators are one of many institutions offering help to startups. Alternate sources of help include incubators, government support programs, universities, investors, and entrepreneurship organizations/associations and collectives. Incubators are facilities set up to nurture entrepreneurs very early on in the startup evolution process⁴³

(typically stages 1 to 4 in Figure I.2). Researchers have advocated the use of business incubators for improving the extent and rate of success of startups.⁴⁴ The OECD has developed a typology of incubators and classified them into three main types: general/mixed-use incubators (whose goal it is to promote economic and industry growth regionally through general business development), Economic Development Incubators (whose aim is to stimulate economic objectives in particular locations), and Technology Incubators (whose goal is to stimulate the development of technology-based firms).⁴⁵

The European Commission provides the below definition of a business incubator:⁴⁶

An organization that accelerates and systematizes the process of creating successful enterprises by providing them with a comprehensive and integrated range of support, including: Incubator space, business support services, and clustering and networking opportunities. By providing their clients with services on a “one-stop-shop” basis and enabling overheads to be reduced by sharing costs, business incubators significantly improve the survival and growth prospects of new startups.

Thus, incubation facilities are usually set up to provide affordable space, shared business services, hands-on training, and general commercialization support. They differ from accelerators in that they are not cohort-based, are not offered on a fixed time frame, generally do not invest in startups, and are usually of a not-for-profit nature. Incubators may be run by universities seeking to support researchers to commercialize their discoveries, by government entities seeking to stimulate economic development, by companies wanting a commercialization arm, or by investors seeking early access to proprietary ideas. Although not as competitive as accelerators, most incubators are still quite selective. That is, they usually only accept entrepreneurs and ideas that are promising and fit specific criteria.

Most national, state, and local government institutions will usually operate startup support programs, especially in locations where the entrepreneurial ecosystem may not have much in the way of private or not-for-profit support institutions. Government support programs can provide support ranging from government operating incubators startup funding grants, startup advisory/coaching/mentoring services, and education programs to supporting workshops and conferences, establishing or operating government-financed angel/venture capital investment bodies, and much more. Some

government programs are ongoing, and others are established to fill a particular ecosystem void for a period of time, for example, until private/NGO and NFP institutions can replace them—at which point those government programs may be shut down. Government support programs are usually free and can result in startups that meet certain criteria receiving millions of dollars in finance without giving up any equity.

In most national, state, and local geographical areas, there will usually be a range of entrepreneurship organizations, entrepreneurship associations, and entrepreneurship groups or collectives that exist to provide support to entrepreneurs on a profit or not-for-profit basis. Some of them are global organizations with reach in almost every country in the world. Many achieve this global reach through digital platforms. Examples of such organizations include the Entrepreneur's Organization (EO), Young Entrepreneur Council (YEC), Social Enterprise Alliance, Startup Grind, Vistage, Entrepreneur.com, and Ashoka. These organizations will usually offer education through content creation, hosted conferences, facilitated peer support groups, and other avenues. For example, Entrepreneur.com provides entrepreneurship education through a range of specialist content addressing common issues faced by startups. And Vistage facilitates peer support groups, mentoring, workshops, and conferences for founders and their key executives leading operational businesses. These organizations will usually also provide access to unique and varied networks. For instance, Vistage and the Entrepreneur's Organization plug members into a global network of business founders, strategic leaders, and thought leaders.

Investors are also able to provide significant support to select entrepreneurs, although this is usually restricted to firms they have invested in, and especially those with the most potential. While they may not provide professional services or working spaces, investors often provide funding, can significantly accelerate entrepreneurs' learning, and can help significantly with strategy, ongoing advice, and hands-on support. They also often have invaluable networks. Finally, there are entities that may bring together different combinations of features from incubators, accelerators, investors, government programs, and entrepreneurship organizations/associations/collectives. See Figure I.4 for a summary of the key features and benefits of the different types of institutions that support startups. In Figure I.4 we have used the terms “early stage” and “late stage”

		Incubators	Angel Investors	Accelerators	Hybrid	Venture Capitalists	Governments Programs/ Grants	Entrepreneurship Organizations/ Associations/ Collectives
Features	Duration	1 to 5 years	Ongoing	3 to 6 months	3 months to 2 years	Ongoing	Variable	Ongoing
	Stage of Evolution	Early or late	Early	Early	Early	Early or late	Early or late	Early or late
	Business Model	Rent; nonprofit	Investment	Investment or nonprofit	Investment or nonprofit	Investment	Nonprofit	Membership; content; conferences; nonprofit
	Selection	Noncompetitive, selective	Competitive, ongoing	Competitive, cyclical	Competitive, ongoing	Competitive, ongoing	Noncompetitive, selective	Features
	Cohorts	No	No	Yes	No	No	No	Features
	Location	On-site	Off-site	On-site	On-site	Off-site	Off-site	Features
Benefits	Accelerated Learning	Moderate	Moderate	Rapid	Moderate	Rapid	Low	Low
	Funding	No	Yes	Yes or No	Yes	Yes	Yes or No	No
	Networks	Yes	Yes	Yes or No	Yes	Yes	Yes	Yes
	Professional Business Services	Yes	No	Yes or No	Yes	No	No	No
	Strategy	Yes	Yes	Yes	Yes	Yes	No	Yes
	Ongoing Advice	Yes	Yes	Yes	Yes	Yes	No	No
	Hands-On Support	Yes or No	Yes or No	Yes or No	Yes or No	Yes	No	No

FIGURE 1.4 Types of Institutions That Support Startups

Source: Based on Hathaway (2013).⁴⁷

to illustrate the point in a startup's evolution at which each support institution typically provides support. The term "early stage" typically refers to startups at stages 1 to 4 in the startup evolution process; whereas the term "late stage" often refers to stages 5 and 6. While an institution may typically help startups at a particular stage, this does not necessarily mean that it will be the most helpful to startups at that stage.

Notes

1. J. Desjardins, "Here's Why Small Businesses Fail," *Business Insider*, August 2, 2017, accessed November 7, 2018, <https://www.businessinsider.com/why-small-businesses-fail-infographic-2017-8?IR=T>.
2. "Entrepreneurship and the U.S. Economy." Bureau of Labor Statistics, United States Department of Labor, April 28, 2016, accessed November 7, 2018, https://www.bls.gov/bdm/entrepreneurship/bdm_chart3.htm.
3. J.A. Timmons, *New Venture Creation: Entrepreneurship in the 21st Century* (Homewood, IL: Irwin, 1990).
4. N. Patel, "90% of Startups Fail: Here's What You Need to Know about the 10%," *Forbes*, January 16, 2015, accessed November 7, 2018, <https://www.forbes.com/sites/neilpatel/2015/01/16/90-of-startups-will-fail-heres-what-you-need-to-know-about-the-10/#4e63bc7a6679>.
5. E. Griffith, "Why Startups Fail, According to Their Founders," *Fortune*, September 25, 2014, accessed November 7, 2018, <http://fortune.com/2014/09/25/why-startups-fail-according-to-their-founders/>.
6. G. Reader, "Around 550,000 People Become Entrepreneurs Every Month," *Entrepreneur*, August 4, 2016, accessed November 7, 2018, <https://www.entrepreneur.com/article/280212>.
7. B. Snyder and Marc Andreessen, "We Are Biased Toward People Who Never Give Up," Stanford Graduate School of Business, June 23, 2014, accessed November 7, 2018, <https://www.gsb.stanford.edu/insights/marc-andreessen-we-are-biased-toward-people-who-never-give>.
8. Ibid.

9. M. Cardon, C. Stevens, and D. Potter, "Misfortune or Mistake? Cultural Sensemaking of Entrepreneurial Failure," *Journal of Business Venturing* 26 (2011): 79–92, doi:10.1016/j.jbusvent.2009.06.004.
10. "The Top 20 Reasons Startups Fail," CB Insights Research, February 2, 2018, accessed November 7, 2018, <https://www.cbinsights.com/research/startup-failure-reasons-top/>.
11. Adapted from M. Sweetwood, "Infographic: The 20 Most Common Reasons Startups Fail and How to Avoid Them," *Entrepreneur*, February 7, 2018, accessed August 1, 2019, <https://www.entrepreneur.com/article/307724>.
12. N. Wasserman, *The Founder's Dilemmas* (Princeton, NJ: Princeton University Press, 2013).
13. Ibid.
14. Ibid.
15. M. Andreessen, "Product/Market Fit," Stanford University, June 25, 2007, accessed October 23, 2018, <http://web.stanford.edu/class/ee204/ProductMarketFit.html>.
16. K. Weisul, "Heavy Hitters Join Theranos Advisory Board," *Inc.*, April 7, 2016, accessed October 23, 2018, <https://www.inc.com/kimberly-weisul/heavy-hitters-join-theranos-advisory-board.html>.
17. S. Blank, *The Four Steps to the Epiphany* (K & S Ranch, 2013).
18. S. Blank and B. Dorf, *The Startup Owner's Manual: The Step-by-Step Guide for Building a Great Company* (K & S Ranch, 2012).
19. D. Lidow, *Startup Leadership: How Savvy Entrepreneurs Turn Their Ideas into Successful Enterprises* (San Francisco: Jossey-Bass, 2014).
20. M. Andreessen, "Product/Market Fit."
21. D. Lidow, *Startup Leadership: How Savvy Entrepreneurs Turn Their Ideas into Successful Enterprises* (San Francisco: Jossey-Bass, 2014).
22. J. Gans, E. L. Scott, and S. Stern, "Strategy for Start-Ups," *Harvard Business Review* (May–June 2018), accessed November 7, 2018, <https://hbr.org/2018/05/do-entrepreneurs-need-a-strategy>.
23. R. Busulwa, M. Tice, and B. Gurd, *Strategy Execution and Complexity: Thriving in the Era of Disruption* (Routledge, 2018).
24. Wasserman, *The Founder's Dilemmas*.
25. Ibid.

26. T. Ogilvie and J. Liedtka, *Designing for Growth: A Design Thinking Toolkit for Managers* (New York: Columbia University Press, 2011).
27. Blank, *The Four Steps to the Epiphany*.
28. Blank and Dorf, *The Startup Owner's Manual*.
29. J. Livingston, *Founders at Work: Stories of Startups' Early Days* (Apress, 2008).
30. Lidow, *Startup Leadership*.
31. Busulwa, Tice, and Gurd, *Strategy Execution and Complexity*.
32. Lidow, *Startup Leadership*.
33. Busulwa, Tice, and Gurd, *Strategy Execution and Complexity*.
34. R. A. Burgelman and A. S. Grove, "Let Chaos Reign, then Rein in Chaos—Repeatedly: Managing Strategic Dynamics for Corporate Longevity," *Strategic Management Journal* 28, no. 10 (2007): 964–979.
35. R. A. Burgelman, "Intraorganizational Ecology of Strategy Making and Organizational Adaptation: Theory and Field Research," *Organization Science* 2, no. 3: (1991): 239–262.
36. S. Cohen, D. C. Fehder, Y. V. Hochberg, and F. Murray, "The Design of Startup Accelerators," *Research Policy* 48 (2019): 1781–1797.
37. B. Clarysse, M. Wright, and J. van Hove, *A Look Inside Accelerators: Building Businesses* (London: NESTA, 2015).
38. S. L. Cohen, C. B. Bingham, and B. L. Hallen, "The Role of Accelerator Designs in Mitigating Bounded Rationality in New Ventures," *Administrative Science Quarterly* (July 23, 2018): 1–45.
39. Cohen, Fehder, Hochberg, and Murray, "The Design of Startup Accelerators."
40. Clarysse, Wright, and van Hove, *A Look Inside Accelerators*.
41. Cohen, Bingham, and Hallen, "The Role of Accelerator Designs."
42. J. Gans, E. L. Scott, and S. Stern, "Strategy for Start-Ups," *Harvard Business Review* (May–June 2018), accessed November 7, 2018, <https://hbr.org/2018/05/do-entrepreneurs-need-a-strategy>.
43. *Technology Incubators: Nurturing Small Firms* (Paris: OECD, 1997).
44. N. Callegati, S. Grandi, and G. Napier, *Business Incubation and Venture Capital: An International Survey on Synergies and Challenges* (Rome: IPI, 2005).

45. *Technology Incubators: Nurturing Small Firms*.
46. European Commission, *Benchmarking of Business Incubators* (Kent: Centre for Strategy & Evaluation Services, 2002).
47. This model builds on I. Hathaway, “What Startup Accelerators Really Do,” *Harvard Business Review* (March 1, 2016), accessed November 6, 2018, <https://hbr.org/2016/03/what-startup-accelerators-really-do>.

CHAPTER 1

The Emergence of Startup Accelerators

The accelerator model has become a “graduate school” for startups.

Alex Friedman, co-founder and president, Ruckus;
Member, Forbes Councils

Emergence

In 1995 Paul Graham and Robert Tappan Morris co-founded Viaweb. They sold the company three years later to Yahoo for \$49 million. Prior to founding Viaweb, Graham had received an undergraduate degree in philosophy from Cornell University, a Master of Science degree, and a PhD from Harvard University. Robert Tappan, on the other hand, had graduated from Harvard University and attended Cornell as a postgraduate student—before being suspended¹ and becoming one of the first people to receive a criminal conviction for hacking.² In early March 2005, almost seven years after the sale of Viaweb, Paul Graham was in conversation with Robert Morris and Trevor Blackwell (who had also been part of the Viaweb team) about possible ways of continuing to work together.³ At that same time, Graham had been contemplating becoming more involved in angel investing. Later that week, he was discussing the venture capital business with Jessica Livingstone, a friend who was contemplating moving from investment banking to work for a Boston-based venture capital (VC) fund. In this conversation, Graham had been pointing out all the things that were wrong with the VC business and that needed to change—investors needed to make smaller investments, they needed to be funding hackers rather than suits, and they ought to fund younger founders. While walking with Jessica

between Harvard Square and his house one day, the idea hit him to start an investment firm with Robert and Trevor and ask Jessica if she would work for that firm instead of the Boston VC firm she was contemplating working for. He discussed the idea with Jessica, and they decided to do it. Graham agreed to put in \$100k, and he would later recruit Robert and Trevor, who each put in \$50k. Their idea was to do seed funding with standardized terms. They based their model on a Viaweb investment arrangement they had in which a friend of theirs, Julian Webber, had invested \$10k, provided support to set up the company, and provided them with early business education in exchange for 10% equity in Viaweb. The idea and model became Y Combinator. Y Combinator experimented with its first startup investments through summer job-style startup acceleration programs. Y Combinator soon had success from four of its first eight cohort companies, with Reddit (acquired by Conde Nast in 2006 for between \$10 and \$20 million) and Loopt (acquired by Green Dot for \$43.4 million) being the biggest exits at the time. Y Combinator's success only improved with subsequent cohort programs.

Ascendance

Given Y Combinator's success with its first few cohorts, it's not surprising that competition soon followed. In 2006 David Cohen, Brad Feld, David Brown, and Jared Polis started the Techstars accelerator. More and more accelerators started to emerge. U.S.-based competition grew slowly to 16 accelerators within the first 3 years before starting to really take off at the end of 2008. After 2008, the number of U.S.-based accelerators grew by nearly 50% per annum before flattening out at around 170 accelerators in 2014.^{4,5} Similar growth was replicated globally, so that by the end of 2016, there were 579 accelerators globally. As at that point in time, these accelerators had invested over \$206 billion in 11,305 startups with 178 exits that year alone. Bart Clarysse, professor of entrepreneurship at the Swiss Federal Institute of Technology in Zurich, observed that most accelerator programs that emerged were modeled on either the Y Combinator or Techstars format.⁶ (See Figure 1.1.)

Why was Y Combinator and its accelerator model such a runaway success? Without a doubt, Y Combinator needed and had an enviable founding team, with stellar education, skills, and experience;

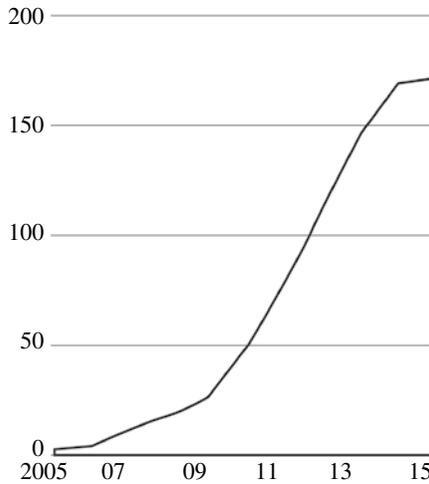


FIGURE 1.1 The Number of U.S. Accelerators Grew Dramatically between 2005 and 2015

Source: Adapted from Hathaway (2016).⁷

and the team had also previously founded and exited multiple startups. But while this may explain part of Y Combinator's success, it does not fully explain the runaway global success of their model. Other factors and trends that may explain some of the model's success include growing availability of access to capital globally, growing number and success of digital technology companies, and growing government interest in entrepreneurship globally. Although these parallel trends explain some of the model's success, our research suggests that Y Combinator did two critical things that, in the main, ensured the success of its model. First, it addressed a major gap in the support available to startups in entrepreneurial ecosystems. This gap is best conceptualized by Figure 1.2, which maps a startup's evolution (on the x axis) against its funding needs⁸ (on the y axis). Figure 1.2 also depicts the risk faced by a startup as it goes through the six stages of startup evolution, and the types of entities that are typically a source of funding and funding related support. Between stages 1 and 2 (the Ideation/Preparation and Customer Discovery stages), founders usually fund the startup themselves or receive funding from family and friends (as Y Combinator founders Paul Graham and Robert Morris did for both Y Combinator and for their earlier startup, Viaweb). From stages 2 to 3 (the

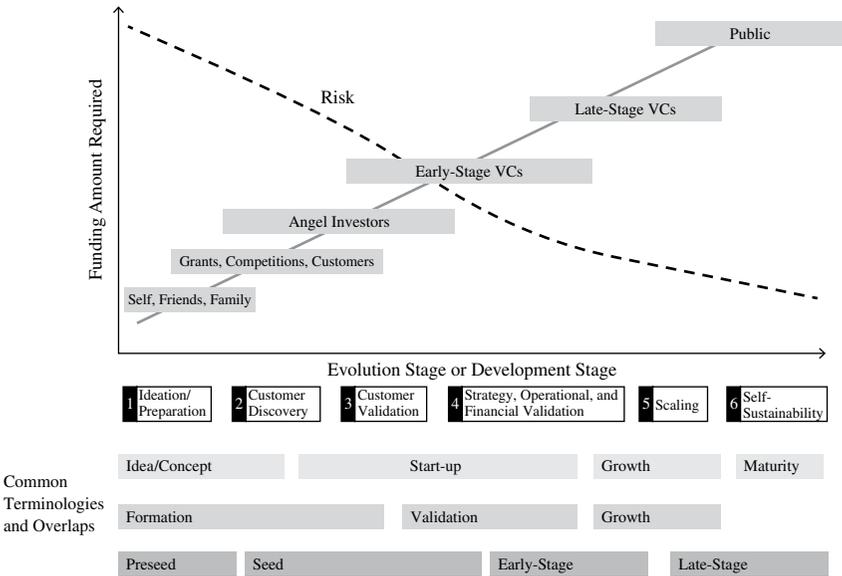


FIGURE 1.2 Startup Evolution and the Introduction of “Smart” Money

Customer Discovery and Customer Validation stages), startups may also source funding from grants (e.g., government or philanthropic grants), competitions (e.g., business planning competitions), and prospective customers (e.g., the problem a startup is solving may be so important to a customer that the customer funds the startup to develop the solution). More recent funding vehicles such as crowd funding and initial coin offerings (ICOs) also fall into this category; notwithstanding that these now offer entrepreneurs the opportunity to raise significantly greater amounts of money, and often without having to give up equity. From stages 3 to 4 (the Customer Validation and Strategy/Operational/Financial Validation stages), startups can usually successfully access angel investment (i.e., investment from high-net-worth individuals who invest their own money, along with their time and expertise, directly into private companies in which they have no family connection, in the hope of financial gain).⁹ And from stage 4 (Strategy/Operational/Financial Validation) onwards, startups can usually access early-stage and late-stage venture capital funding (venture capital funds come from sources such as pension funds, banks, and foundations—there is a duty of care for how these funds are invested which may influence when VC

firms can invest).¹⁰ Of course, there are exceptions to the accessibility of each type of funding—depending on the founders, the nature of the startup, and the nature of the funding environment. And, needless to say, there are many overlaps—or points at which more than one funding source can be accessed. Below the startup evolution or development stages, we show other terminology often used to describe these stages and the overlaps within this terminology. For example, stage 1 (Ideation/Preparation) can also be referred to as the *Idea/Concept* stage or the *Pre-seed* stage. The term *startup* is sometimes used to describe the activities between Customer Discovery and Strategy/Operational/Financial Validation. Other times it is used to describe the full journey from stage 1 to stage 6. The term *growth* is sometimes used to describe the *Scaling* stage. Stages 1 to 2 can sometimes be referred to as *Formation*, and stages 3 to 4 can sometimes be referred to as *Validation*. Stages 2 to 4 can sometimes be referred to as the *Seed* stage, with stages 4 to 5 often referred to as the *Early* stage, and stages 5 to 6 as the *Late* stage. The overlapping terminology can often create confusion, so we clarify it here prior to further unpacking the startup support gap addressed and the success of Y Combinator’s accelerator model at addressing it.

As Figure 1.2 shows, “smart” money (funding that also comes with the expertise critical to helping entrepreneurs maximize startup development speed, scale, and odds of success), is usually accessible from stage 3 onwards. It is usually from this stage that more sophisticated angel investors can be attracted, followed by early-stage and late-stage VCs between stages 4 and 5. Paradoxically, founders face the highest risk of failure and perhaps the greatest need for “smart” money support before they are able to access “smart” money. The Y Combinator model provided an effective solution to this paradoxical problem and support gap within entrepreneurial ecosystems. It provided a highly effective proof of concept for the idea that providing early “smart” money support could both help entrepreneurs and, at the same time, be of commercial value. The success of the model meant that “smart” money investors would have improved investment opportunities (i.e., greater quantity and quality of startups making it to the “smart” money stages). It also meant that existing companies would have improved acquisition opportunities (more startups to buy/better quality startups to buy), and public markets would also have improved IPO opportunities (more/better startups making it to IPO stage). Governments and communities would

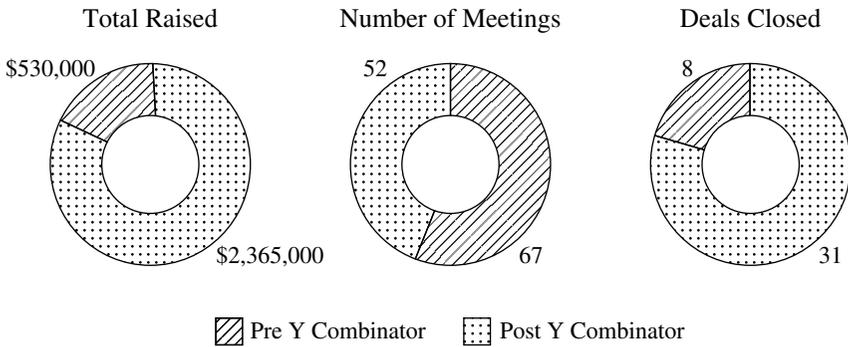


FIGURE 1.3 Jarrett Streebin, EasyPost Founder and Y Combinator Alumnus, Contrasts His Fund-raising Effort and Success before and after Participating in the Y Combinator Accelerator

Source: Adapted from Streebin (2014).¹¹

also have improved innovation, economic development, and job creation opportunities from the greater number of startups succeeding, or at least surviving longer. Essentially, the accelerator model supercharged entrepreneurial ecosystems and provided tangible and intangible benefits to most ecosystem entities and stakeholders (e.g., see Figure 1.3.) We believe the problem the accelerator model solved, and the benefits it provided to entrepreneurial ecosystem entities and stakeholders, made its global adoption irresistible.

Expansion

As the number of accelerators grew, they began to differentiate their offerings and branch out into different niches. For example, some accelerators started to differentiate themselves on location, on cohort sizes, on global reach, on the nature of their networks, on accelerator size, on sector, on industry, on value chain area, on technology type, on customer type, and so on. Thus today, there are a large number of different types of accelerators. These include, for example, non-corporate accelerators, corporate accelerators, government accelerators, NGO (nongovernment organization)/NFP (not-for-profit) accelerators, university accelerators, specific industry accelerators (e.g., defense, healthcare, media, etc.), specific technology accelerators (e.g., IoT, blockchain, fintech, etc.), and many others. As we noted in the introduction, noncorporate accelerators

usually follow the original Y Combinator accelerator model, offering the seven benefits discussed earlier in exchange for equity investment, although not all accelerators take equity. Corporate, government, NGO/NFP, and other accelerators are usually run by or on behalf of corporations, governments, or NGO/NFP organizations for a range of different strategic reasons. Such reasons can include stimulation of innovation, enhancing adaptive capacity, learning commercialization skills, stimulating economic development, and many more. For example, there is a Barclay's accelerator focusing on Fintech startups, and a Comcast NBC Universal LIFT Labs Accelerator focusing on media startups. Other examples include the United Arab Emirates' Government Accelerator Program, which, through a range of different accelerator programs, brings together people across government to rapidly address government challenges.

Accelerators have also started to differentiate themselves by stage of startup evolution. That is, to focus exclusively on earlier or later stages of startup evolution. Early on, accelerators invested less money, and took on more ideation/preparation and customer-discovery stage startups. As they have grown in size and competition has intensified, many accelerators have begun to invest much more money and take more developed startups with greater exit certainty and better return multiples. For example, many of the original accelerators that initially focused on cohorts at the customer-discovery stage now mostly take startups that have found product/market fit (part of the customer validation stage). As a result, the odds of getting into some of these accelerators is now almost commensurable with the odds of getting venture capital investment. But while these accelerators have shifted their focus to more developed startups, several new programs have sprung up with an exclusive focus on the ideation/preparation and or the customer-discovery stages. For example, programs such as Startup Weekend bring together people interested in being part of a startup (e.g., developers, business managers, aspiring entrepreneurs, marketing gurus, designers, and more), and facilitate a program to help them derive startup ideas, form startup teams, and leverage these teams to translate the ideas into minimum viable products (MVPs) or working prototypes. Other programs, branding themselves as pre-accelerators, focus exclusively on the stages that are too early for most accelerators. These programs focus on supporting aspiring entrepreneurs or other people

with startup involvement intentions to accelerate advancement to the stage where most accelerators are ready to accept a startup. For example, Startup Boost supports aspiring entrepreneurs by providing them with one-on-one mentorship as well as experienced entrepreneur, investor, and industry connections to help them move as fast as possible from intention to being ready to enter an accelerator such as Techstars. Newer types of programs, sometimes referred to as “germinators,” amalgamate some of the benefits of accelerators and incubators, and even go beyond these benefits, to play part of the confounding role for a temporary or contingent timeframe. For example, in addition to the accelerator benefits, such programs may also provide product development as a service-type infrastructure. This infrastructure may be in the form of software development teams (in the case of potential software product startups), or labs (in the case of potential biotechnology startups). Examples of these programs include Biotechandbeyond, which provides lab space, shared resources, and other support to make it easy for science startups. The accelerator types and the nature of their offerings continue to evolve to accelerate the efficiency and success rate of startups.

Impact

The impacts and implications of accelerators are best understood by exploring the role they play in entrepreneurial ecosystems, how they impact different ecosystem actors, and how they impact the system as a whole. Exact definitions of what an ecosystem comprises of are scarce.¹² Some researchers view an entrepreneurial ecosystem as a conceptual framework designed to foster economic development via entrepreneurship, innovation, and small-business growth.¹³ Others view an entrepreneurial ecosystem as a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship.¹⁴ For the purpose of this book, we draw on the different definitions and use the term to describe the configuration and interaction of the different entities, actors, and stakeholders that influence the rate and extent to which startups emerge and succeed. The actors or entities within entrepreneurial ecosystems are diverse and include accelerators (providing mentoring, curriculum-based experiential learning programs, funding, investor networks, hands on support, professional services, etc.), incubators (providing

working spaces, discounted professional services, etc.), and venture capital firms/angel investors/other investors (providing funding, accelerated evolution, etc.). They also include government entrepreneurship support organizations (providing ecosystem strategic leadership as well as nurturing actors/entities to fill temporary ecosystem gaps or filling these gaps until such actors can, providing incentives and disincentives, etc.), startup and business planning competition entities (providing early concept development direction, concept validation and funding, etc.), and startup service providers (providing startup focused services). They extend to also include entrepreneurship education organizations (e.g., those providing formal entrepreneurship education programs), entrepreneurship research organizations (e.g., those finding solutions to entrepreneurship issues or explaining the dynamics of entrepreneurial ecosystems), and small business support entities (providing early and later generic business support). Extending even further, they include entrepreneurship and startup associations (providing community/belonging, peer support, peer-based learning and peer collaboration opportunities for entrepreneurs and aspiring entrepreneurs, etc.), established businesses (who may be potential customers, investors, acquirers, competitors of entrepreneurial businesses, etc.), and the wider community (e.g., community attitudes towards entrepreneurs may shape government entrepreneurship policy and investment, treatment of entrepreneurs and therefore entrepreneurial intentions, etc.).

Startup accelerators play a unique role in entrepreneurial ecosystems that includes but is not limited to, closing the “smart” money gap, sharing startup acceleration best practices, raising the bar of other entrepreneurial ecosystem entities through competition, expanding the supply of startup-ready entrepreneurs, upgrading and expanding the network of mentors and advisors available to founders, improving community know-how of startup evolution and of the entrepreneurial process, improving the link between founders and corporates, as well as improving the link between founders and government institutions. By playing this unique role, accelerators increase the number of startups making it to smart money, and ultimately succeeding. As a part of this, they increase the number of entrepreneurs and investors successfully exiting startup deals. In doing so, they may indirectly expand the competition for startups as

an investment product (e.g., see Figure 1.4). They also lead to more and better-quality startup investment opportunities being available to “smart” money investors, more and bigger startup success stories, and therefore faster economic development and job creation. Thus, in the same way startup accelerators accelerate startups, they also supercharge and accelerate the development, efficiency, and effectiveness of entrepreneurial ecosystems.

Future

Since coming into the public consciousness in 2005, accelerators have become one of the most powerful vehicles for helping entrepreneurs to learn rapidly, connect with powerful networks, raise money, and build their startups at speed and scale. In doing so, they have supercharged entrepreneurial ecosystems and demonstrated their potential to accelerate economic development, expand job creation, and enhance economic competitiveness. All this has occurred in just over 10 years. Based on the impact over this term, the impact of accelerators on entrepreneurship and the entrepreneurial process over the next 10 to 20 years may be more comparable to the impact of the internet on business. Irrespective of the size of the impact, we believe accelerators will continue to further unpack startup evolution challenges, illuminate the causes, and make solving the challenges more of a science.

We anticipate that accelerators will continue to specialize and differentiate themselves on the types of startup evolution challenges they help entrepreneurs solve, the types of skills they help founders develop, and the types of support services they provide founders. We anticipate that with time, there will be a proliferation of corporate and government accelerators as large institutions start to fully understand the benefits of accelerators for solving complex problems, driving innovation needs, and enabling adaptation to environmental change. At present, accelerators are largely the domain of investors or entities with access to large amounts of money. But we expect to see more and more entrepreneurs start contemplating just why they shouldn't start their own accelerators. We expect this will intensify competition among accelerators leading to more diverse and hands-on help being available to founders. We also expect

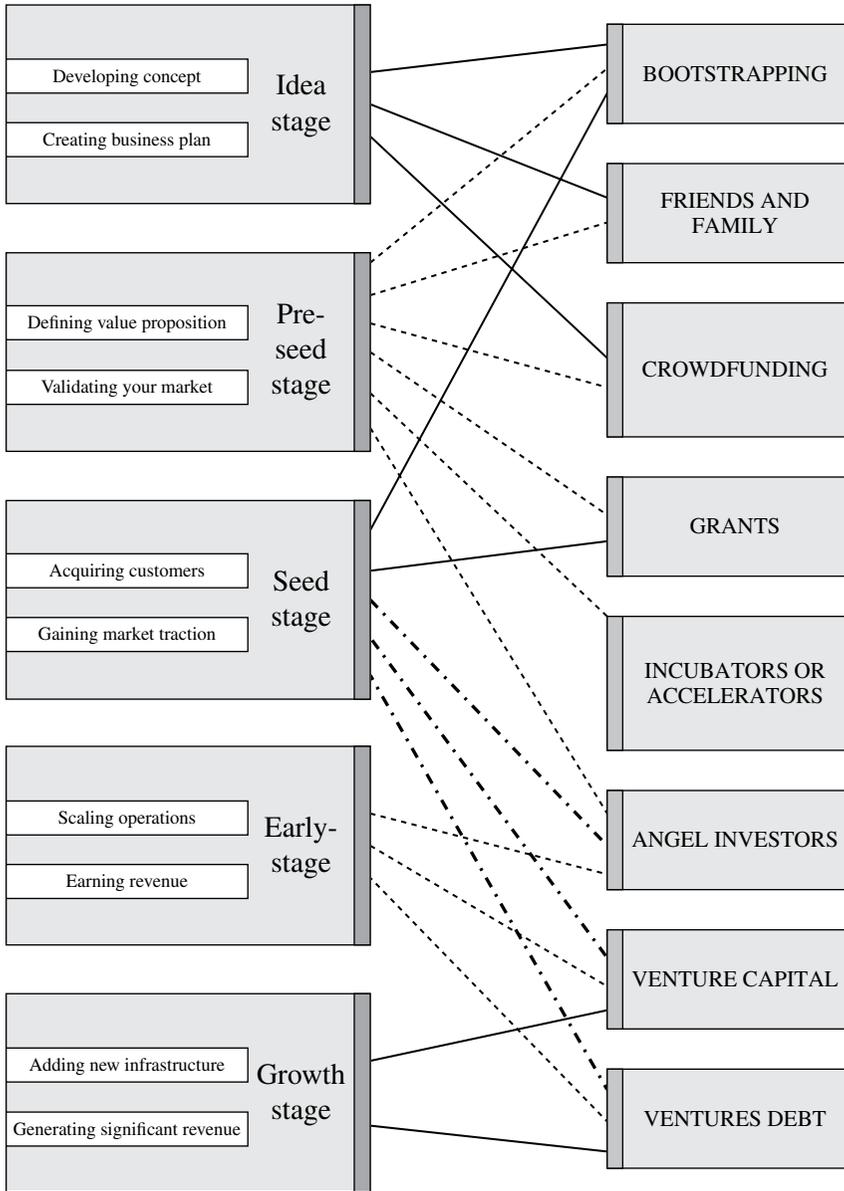


FIGURE 1.4 Expanding Funding Options Now Available to Entrepreneurs at Different Stages

Source: Adapted from Jumpstart (2018).¹⁵

startup evolution to become more scientific, entrepreneurial ecosystems to become more efficient and effective, and economic development and job creation to accelerate in the regions that embrace and invest in accelerators.

Notes

1. J. Markoff, "Cornell Suspends Computer Student," *New York Times*, May 25, 1989, accessed July 31, 2019, <https://www.nytimes.com/1989/05/25/us/cornell-suspends-computer-student.html>.
2. E. Fuchs, "How the 'Computer Wizard' Who Created the First Internet Virus Got Off without a Day of Jail," *Business Insider*, January 22, 2013, accessed July 31, 2019, <https://www.businessinsider.com.au/why-robert-morris-didnt-go-to-jail-2013-1?r=US&IR=T>.
3. YCombinator, accessed July 31, 2019, <https://www.ycombinator.com/>.
4. I. Hathaway, "Accelerating Growth: Startup Accelerator Programs in the United States," Brookings Institution (2016).
5. I. Hathaway, "What Startup Accelerators Really Do," *Harvard Business Review*, March 2016.
6. B. Clarysee, M. Wright, and J. van Hove, *A Look Inside Accelerators: Building Businesses* (London: NESTA, 2015).
7. Adapted from I. Hathaway, "What Startup Accelerators Really Do," *Harvard Business Review*, March 1, 2016, accessed August 1, 2019, <https://hbr.org/2016/03/what-startup-accelerators-really-do>.
8. Ciarán Mac an Bhaird and Brian Lucey, "An Empirical Investigation of the Financial Growth Lifecycle," *Journal of Small Business and Enterprise Development* 18, no. 4 (2011): 715–731.
9. C. Mason, "Business Angel Investing," in *The Handbook of Personal Wealth Management: How to Ensure Maximum Investment Returns with Security* (Kogan Page, 2005), 169–175.
10. Ibid.
11. J. Streebin, "Was Y Combinator Worth It?" *TechCrunch*, February 15, 2014, accessed August 1, 2019, <https://techcrunch.com/2014/02/15/was-y-combinator-worth-it/>.
12. D. B. Audretsch, J. A. Cunningham, D. F. Kuratko, E. E. Lehmann, and M. Menter, "Entrepreneurial Ecosystems: Economic, Technological and Societal Impacts," *Journal of Technology Transfer* 44 (2019): 313–325.

13. T. Mazzarol, “Growing and Sustaining Entrepreneurial Ecosystems: What They Are and the Role of Government Policy” (white paper WP01-2014, Small Enterprise Association of Australia and New Zealand (SEAANZ, 2014)), www.seaanz.org.
14. E. Stam, “Entrepreneurial Ecosystems and Regional Policy: A Sympathetic Critique,” *European Planning Studies* 23, no. 9 (2015): 1759–1769.
15. “Understanding Funding: The Stages of a Typical Startup Company & Its Funding Options,” JumpStart, April 23, 2018, accessed August 1, 2019, <https://www.jumpstartinc.org/understanding-funding-stages-typical-startup-company-funding-options/>.