



THE CAPCO INSTITUTE
JOURNAL
OF FINANCIAL TRANSFORMATION

ORGANIZATION

The Innovation Stack: How to make
innovation programs deliver
more than coffee cups

STEVE BLANK

**NEW WORKING
PARADIGMS**

#52 JANUARY 2021

THE CAPCO INSTITUTE

JOURNAL OF FINANCIAL TRANSFORMATION

RECIPIENT OF THE APEX AWARD FOR PUBLICATION EXCELLENCE

Editor

Shahin Shojai, Global Head, Capco Institute

Advisory Board

Michael Ethelston, Partner, Capco

Michael Pugliese, Partner, Capco

Bodo Schaefer, Partner, Capco

Editorial Board

Franklin Allen, Professor of Finance and Economics and Executive Director of the Brevan Howard Centre, Imperial College London and Professor Emeritus of Finance and Economics, the Wharton School, University of Pennsylvania

Philippe d'Arvisenet, Advisor and former Group Chief Economist, BNP Paribas

Rudi Bogni, former Chief Executive Officer, UBS Private Banking

Bruno Bonati, Former Chairman of the Non-Executive Board, Zuger Kantonalbank, and President, Landis & Gyr Foundation

Dan Breznitz, Munk Chair of Innovation Studies, University of Toronto

Urs Birchler, Professor Emeritus of Banking, University of Zurich

Géry Daeninck, former CEO, Robeco

Jean Dermine, Professor of Banking and Finance, INSEAD

Douglas W. Diamond, Merton H. Miller Distinguished Service Professor of Finance, University of Chicago

Elroy Dimson, Emeritus Professor of Finance, London Business School

Nicholas Economides, Professor of Economics, New York University

Michael Enthoven, Chairman, NL Financial Investments

José Luis Escrivá, President, The Independent Authority for Fiscal Responsibility (AIReF), Spain

George Feiger, Pro-Vice-Chancellor and Executive Dean, Aston Business School

Gregorio de Felice, Head of Research and Chief Economist, Intesa Sanpaolo

Allen Ferrell, Greenfield Professor of Securities Law, Harvard Law School

Peter Gomber, Full Professor, Chair of e-Finance, Goethe University Frankfurt

Wilfried Hauck, Managing Director, Statera Financial Management GmbH

Pierre Hillion, The de Picciotto Professor of Alternative Investments, INSEAD

Andrei A. Kirilenko, Reader in Finance, Cambridge Judge Business School, University of Cambridge

Mitchel Lenson, Former Group Chief Information Officer, Deutsche Bank

David T. Llewellyn, Professor Emeritus of Money and Banking, Loughborough University

Donald A. Marchand, Professor Emeritus of Strategy and Information Management, IMD

Colin Mayer, Peter Moores Professor of Management Studies, Oxford University

Pierpaolo Montana, Group Chief Risk Officer, Mediobanca

John Taysom, Visiting Professor of Computer Science, UCL

D. Sykes Wilford, W. Frank Hipp Distinguished Chair in Business, The Citadel

CONTENTS

LEADERSHIP

- 08 Digital leadership: Meeting the challenge of leading in a digitally transformed world**
Nelson Phillips, Professor of Innovation and Strategy and Co-Director, Centre for Responsible Leadership, Imperial College Business School, Imperial College
- 16 Innovating for growth in an era of change**
Alex Sion, Head of New Venture Incubation, Global Consumer Bank, Citi Ventures
- 24 Five key steps to adopt modern delivery in your financial institution**
Poorna Bhimavarapu, Executive Director, Capco
David K. Williams, Managing Principal, Capco
- 34 Leading in the digital age**
Claudia Peus, SVP, Talentmanagement and Diversity, and Professor of Research and Science Management, Technical University of Munich
Alexandra Hauser, Senior Expert Leadership and Organizational Development, Technical University of Munich
- 42 Designing a digital workplace: Introducing complementary smart work elements**
Tina Blegind Jensen, Professor, Department of Digitalization, Copenhagen Business School
Mari-Klara Stein, Associate Professor, Department of Digitalization, Copenhagen Business School

WORKFORCE

56 **Team to market: An emerging approach for creating dream teams for the post-pandemic world**

Feng Li, Chair of Information Management and Head of Technology and Innovation Management, Business School (formerly Cass), City, University of London

Clare Avery, Business Development Manager, Business School (formerly Cass) and Head of Cass Consulting, City, University of London

68 **Engaging employees with organizational change**

Julie Hodges, Professor in Organizational Change and Associate Dean for MBA and DBA Programmes, Business School, Durham University

76 **Making collaboration tools work at work: Navigating four major implementation dilemmas**

Nick Oostervink, Former Researcher, KIN Center for Digital Innovation, School of Business and Economics, Vrije Universiteit Amsterdam

Bart van den Hooff, Professor of Organizational Communication and Information Systems, KIN Center for Digital Innovation, School of Business and Economics, Vrije Universiteit Amsterdam

86 **How to successfully work in the redefined world of work: Time-spatial job crafting as a means to be productive, engaged and innovative**

Christina Wessels, Formerly, Rotterdam School of Management, Erasmus University

Michaéla C. Schippers, Professor of Behaviour and Performance Management, Rotterdam School of Management, Erasmus University

ORGANIZATION

94 **Can businesses recover from the crisis? Assessing scenarios, riding trends**

Leslie Willcocks, Professor of Work, Technology and Globalisation, London School of Economics and Political Science

102 **Value streams – a future-proof way to organize your firm**

Robert Ord, Managing Principal, Capco

Alla Gancz, Partner, Capco

Daniella Chrysochou, Senior Consultant, Capco

Ana Nikolova, Senior Consultant, Capco

Raymond Tagoe, Senior Consultant, Capco

112 **Managing strategic and cultural change in organizations**

Jaap Boonstra, Professor of Organization Dynamics, Esade Business School

122 **The Innovation Stack: How to make innovation programs deliver more than coffee cups**

Steve Blank, Adjunct Professor of Entrepreneurship, Stanford University

128 **The risks of artificial intelligence used for decision making in financial services**

Udo Milkau, Digital Counsellor, European Association of Co-operative Banks (EACB)

142 **Security token offering – new way of financing in the digital era**

Seen-Meng Chew, Associate Professor of Practice in Finance, and Assistant Dean for External Engagement, CUHK Business School

Florian Spiegl, Co-founder and COO, FinFabrik

152 **Eternal coins? Control and regulation of alternative digital currencies**

Matthew Leitch, Associate, Z/Yen Group

Michael Mainelli, Executive Chairman, Z/Yen Group



DEAR READER,

Welcome to edition 52 of the Capco Institute Journal of Financial Transformation.

Transformation has been a constant theme in our industry for several decades, but the events of 2020 have accelerated change in employee working patterns, and in the very nature of the workplace itself. This Journal examines three key elements of these new working paradigms – leadership, workforce, and organization.

As we explore in this edition, a key part of any firm's transformation agenda centers around digital leadership and how to tackle the novel challenges created by changes within organizations and society. Leaders need advanced organizational skills to build teams that use digital technologies, as well as to inspire millennial workers who have grown up in a digitally transformed world. They also need deeper technology skills to lead, and a broader understanding of the ethical paradigms introduced by the challenges created through new technologies such as AI. These enhanced skillsets will help today's leaders and their teams fully realize the benefits of new working models.

The topics reviewed in this Journal offer flexibility for employees, increased agility for teams, and a combination of both for organizations. When supported by the right technology, these can create collaborative, outcome-driven environments. Through the resulting remote or hybrid models, organizations can transform their workforce and operations to boost productivity, cost effectiveness and employee engagement, while enhancing resilience and customer experiences.

As always, our contributors to this Capco Journal are distinguished, world-class thinkers. I am confident that you will find the quality of thinking in this latest edition to be a valuable source of information and strategic insight.

Thank you to all our contributors and thank you for reading.

A handwritten signature in black ink, appearing to read 'Lance Levy', with a stylized, flowing script.

Lance Levy, **Capco CEO**

THE INNOVATION STACK: HOW TO MAKE INNOVATION PROGRAMS DELIVER MORE THAN COFFEE CUPS¹

STEVE BLANK | Adjunct Professor of Entrepreneurship, Stanford University

ABSTRACT

Is your organization full of hackathons, shark tanks, incubators, and other innovation programs, but none have changed the trajectory of your company/agency? Finding out why some innovation programs succeed and others fail is not easy, and it took many years for Pete Newell, CEO at BMNT Inc., and I to identify the answer to this question. We now believe that we have a better understanding of how to build innovation programs that will deliver products and services, not just demos. In this article, we explain why an understanding of “Innovation Stack” – the hierarchy of innovation efforts that have emerged in large organizations and consist of “individual innovation”, “innovation tools and activities”, “team-based innovation” and “operational innovation” – could help organizations build successful innovation programs.

1. INTRODUCTION

Is your organization full of hackathons, shark tanks, incubators, and other innovation programs, but none have changed the trajectory of your company/agency?

Over the last few years, Pete Newell, CEO at BMNT Inc., and I have helped build innovation programs inside large companies, across the U.S. federal science agencies, and in the Department of Defense and Intelligence Community. However, it is only recently that we realized why some programs succeed and others are failing.

After doing deep dives in multiple organizations we now understand why individual innovators are frustrated, and why entrepreneurial success requires heroics. We can also explain why innovation activities have generated innovation theater, but few deliverables, and why innovation in large organizations looks nothing like startups. Most importantly, we now have a better idea of how to build innovation programs that will deliver products and services, not just demos.

It starts by understanding the “Innovation Stack” – the hierarchy of innovation efforts that have emerged in large organizations. The stack consists of: “individual innovation”, “innovation tools and activities”, “team-based innovation”, and “operational innovation”.

2. INDIVIDUAL INNOVATION

Pursuit of innovation inside large companies/agencies is not a 21st century invention. Ever since companies have existed, there have been passionate individuals who saw that something new, unplanned, and unscheduled was possible. Pushing against the status quo of existing processes, procedures, and plans, they went about building a demo/prototype, and through heroic efforts succeeded in getting a new innovation over the goal line – by shipping/deploying a new innovation.

¹ This article first appeared on steveblank.com

INNOVATION STACK			
Leadership	Guidance/investment/ organizational decision	Innovation as a parallel system	Innovation doctrine Barrier reduction
Operational innovation	Pipeline	Innovation pipeline H4X, ONR	Deliver more, faster Decision points
Single team innovation	Lean/I-Corps	I-Corps@NSF, H4D	Evidence-based MVPs Incubator-ready team
Innovation activities	Activities/training	Lean, design thinking, hackathons, incubators, outposts, maker spaces	Innovation demos, prototypes People
Individual innovation	Heroic	Innovators alliance	One-off successes Frustration with system
	PROCESS	EXAMPLES	DELIVERABLE

We describe their efforts as “heroic” because all the established procedures and processes in a large company are primarily designed to execute and support the current business model. From the point of view of someone managing an engineering, manufacturing, or operations organization, new, unplanned, and unscheduled innovations are a distraction and a drag on existing resources. (The best description I have heard is that, “Unfettered innovation is a denial of service attack on core capabilities.”) That is because until now, we had not levied any requirements, rigor, or evidence on the innovator to understand what it would take to integrate, scale, and deploy products/services.

Finally, most corporate/agency innovation processes funnel “innovations” into “demo days”² or “shark tanks”³, where they face an approval/funding committee that decides which innovation ideas are worth pursuing. However, without any measurable milestones to show evidence of the evolution of what the team has learned about the validity of the problem, customer needs, pivots, etc., the best presenter and flashiest demo usually win.

In some companies and government agencies, innovators even have informal groups, i.e., an Innovators Alliance, where they can exchange best practices and workarounds to the system. (Think of this as the innovator’s support group.) However, these innovation activities are adhoc, and the innovators’ lack authority, resources, and formal processes to make innovation programs an integral part of their departments or agencies.

2.1 Innovators versus entrepreneurs

There are two types of people who engage in large company/agency innovation:⁴ innovators – those who invent new technology, product, service, or processes; and entrepreneurs – those who have figured out how to get innovation adopted and delivered through the existing company/agency procedures and processes. Although some individuals operate as both innovator and entrepreneur, any successful innovation program requires an individual or a team with at least these two skill sets.

Individual innovation	ENTREPRENEURS – GET INNOVATION ADOPTED		
	INNOVATORS – INVENT THINGS		
	Heroic	Innovators alliance	One-off successes Frustration with system
	PROCESS	EXAMPLES	DELIVERABLE

² <https://bit.ly/33LPkxr>

³ <https://bit.ly/2FdT4h9>

⁴ <https://bit.ly/2ChwhQr>

3. INNOVATION TOOLS AND ACTIVITIES

Over the last decade, innovators have realized that they needed tools and activities that are different from traditional project management tools used for new versions of existing products/customers. They have passionately embraced innovation tools and activities that, for the first time, help individual innovators figure out what to build, who to build it for, and how to create effective prototypes and demos.

Some examples of innovation “tools” are “customer development”, “design thinking”, “user-centric design”, “business model canvas”, “storytelling”, etc. Companies/agencies have also co-opted innovation activities developed for startups such as hackathons,⁵ incubators, internal “kickstarters”, as well as “open innovation” programs⁶ and “maker spaces”⁷ that give individual innovators a physical space and dedicated time to build prototypes and demos. In addition, companies and agencies have set up “innovation outposts”⁸ (most often located in Silicon Valley) to be closer to the relevant technology and then to invest, partner, or buy.

INNOVATION STACK			
Leadership	Guidance/investment/organizational decision	Innovation as a parallel system	Innovation doctrine Barrier reduction
Operational innovation	Pipeline	Innovation pipeline H4X, ONR	Deliver more, faster Decision points
Single team innovation	Lean/I-Corps	I-Corps@NSF, H4D	Evidence-based MVPs Incubator-ready team
Innovation activities	Activities/training	Lean, design thinking, hackathons, incubators, outposts, maker spaces	Innovation demos, prototypes People
Individual innovation	Heroic	Innovators alliance	One-off successes Frustration with system
	PROCESS	EXAMPLES	DELIVERABLE

These activities make sense in a startup ecosystem, where 100 percent of the company is focused on innovation; however, they generate disappointing results inside companies/agencies, when 98 percent of the organization is focused on executing the existing business/mission model. While these tools and activities educated innovators and generated demos and prototypes, they lacked an end-to-end process that focused on delivery/deployment. Hence, it should be no surprise that very few contributed to the company’s top or bottom line (or an agency’s mission).

One of the ironies of the tools/activities groups is rather than talking about the results of using the tools – i.e., the ability to rapidly deliver new products/services that are wanted and needed – their passion has them evangelizing the features of the tools and activities. This means that senior leadership has pigeonholed most of these groups as extensions of corporate training departments and skeptics view this as the “latest fad.”

4. TEAM-BASED INNOVATION

Rather than just teaching innovators how to use new tools or having them build demos, we recognized that there was a need for a process that taught all the components of a business/mission model (who are the customers, what product/service solves their problem, how do we get it to them, support it, etc.) The next step in entrepreneurial education was to teach teams a formal innovation process for how to gather evidence that lets them test if their idea is feasible, desirable, and viable. Examples of team-based innovation programs are the National Science Foundation Innovation Corps (I-Corps@NSF),⁹ for the Intelligence Community ICorps@NSA, and for the Department of Defense, Hacking for Defense (H4D)¹⁰.

In contrast to single-purpose activities like incubators, hackathons, kickstarters, etc., these curricula teach what it takes to turn an idea into a deliverable product/service

⁵ <https://bit.ly/2X0yHNO>
⁶ <https://bit.ly/2PEud8d>
⁷ <https://bit.ly/3gOp20N>
⁸ <https://bit.ly/3f0iBtP>
⁹ <https://bit.ly/30LNo6o>
¹⁰ <https://bit.ly/3kvg0gJ>

INNOVATION STACK			
Leadership	Guidance/investment/ organizational decision	Innovation as a parallel system	Innovation doctrine Barrier reduction
Operational innovation	Pipeline	Innovation pipeline H4X, ONR	Deliver more, faster Decision points
Single team innovation	Lean/I-Corps	I-Corps@NSF, H4D	Evidence-based MVPs Incubator-ready team
Innovation activities	Activities/training	Lean, design thinking, hackathons, incubators, outposts, maker spaces	Innovation demos, prototypes People
Individual innovation	Heroic	Innovators alliance	One-off successes Frustration with system
	PROCESS	EXAMPLES	DELIVERABLE

by using the scientific method of hypothesis testing and experimentation outside the building. This process emphasizes rapid learning cycles with speed, urgency, accepting failure as learning, and innovation metrics.

Teams talk to 100+ beneficiaries and stakeholders while building minimal viable products to maximize learning and discovery. They leave the program with a deep understanding of all the obstacles and resources needed to deliver/deploy a product.

The good news – I-Corps, Hacking for Defense, and other innovation programs that focus on training single teams have raised the innovation bar. These programs have taught thousands of teams of federally funded scientists, as well as innovators in corporations, the Department of Defense, and intelligence community. However, over time, we have seen teams that completed these programs run into scaling challenges. Even with great evidence-based minimal viable products (prototypes), teams struggled to get these innovations deployed at scale and in the field; or a team that achieved product-market fit building a non-standard architecture could find no way to maintain it at scale within the parent organization.

Upon reflection we identified two root causes. The first is a **lack of connection** between innovation teams and their parent organization. Teams form/and are taught outside of their parent organization because innovation is disconnected from other activities. This meant that when teams went back to their home organization, they found that execution of existing

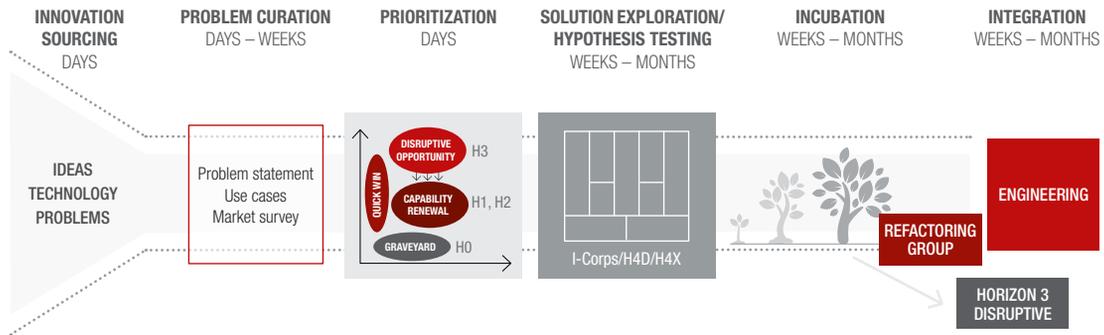
priorities took precedence. They returned speaking a foreign language (What’s a pivot? Minimum viable what?) to their colleagues and bosses who are rewarded on execution-based metrics. Further, as budgets are planned out years in advance, their organization had no slack for “good ideas.” As a result, there was no way to finish and deploy whatever innovative prototypes the innovators had developed – even ones that have been validated.

The second root cause emerged because neither the innovator’s teams nor their organizations had the mandate, budget, or people to build an end-to-end **innovation pipeline process**, one that started with innovation sourcing funnel (both internal and external sources) all the way to integrating their prototypes into mainstream engineering production (see below and Blank and Newell (2017)¹¹ on the innovation pipeline).

5. OPERATIONAL INNOVATION

As organizations have moved from individual innovators working alone, to adopting innovation tools and activities, to teaching teams about evidence-based innovation, our most important realization has been this: having skills/tools and activities are critical building blocks but by themselves are insufficient to build a program that delivers results that matter to leadership. **It is only when senior leaders see how an innovation process can deliver stuff that matters – at speed – that they take action to change the processes and procedures that get in the way.**

¹¹ Blank, S., and P. Newell, 2017, “What your innovation process should look like,” Harvard Business Review, September 11, <https://bit.ly/31HXC6K>



We believe that the next big step is to get teams and leaders to think about the innovation process from end-to-end – that is to visualize the entire flow of how and from where an idea is generated (the source) all the way to deployment (how it gets into users’ hands). Hence, we have drawn a canonical “innovation pipeline” [Blank and Newell (2017)]. For context, in the figure below, the I-Corps program described earlier is the box labeled “Solution exploration/hypotheses testing.” We have surrounded that process with all the parts necessary to **build and deliver** products and services at speed and at scale.

Second, we have realized that while individual initiatives won “awards,” and incubators and hackathons got coffee cups and posters, senior leadership sat up and took notice when **operating groups transformed how they work in the service of a critical product or mission**. When teams in operating groups adopted the innovation pipeline, it made an immediate impact on delivering products/services at speed.

An operating group can be a corporate profit and loss center or anything that affects revenue, profit, users, market share, etc. In a government agency it can be something that allows a group to execute mission more effectively or in a new disruptive way. Operating groups have visibility, credibility, and, most importantly, direct relevance to mission.

Where are these groups? In every large company or agency there are groups solving operational problems that realize “they can’t go on like this” and/or “we need to do a lot more stuff” and/or “something changed, and we rapidly need to find new ways to do business.” These groups are ready to try something new. Most importantly, we learned that “the something new” is emphatically not more tools or activities (design thinking, user-centric design, storytelling, hackathons, incubators, etc.) Because these groups want an end-to-end solution, the innovation pipeline resonates with the “doers” who lead these groups.

INNOVATION STACK			
Leadership	Guidance/investment/organizational decision	Innovation as a parallel system	Innovation doctrine Barrier reduction
Operational innovation	Pipeline	Innovation pipeline H4X, ONR	Deliver more, faster Decision points
Single team innovation	Lean/I-Corps	I-Corps@NSF, H4D	Evidence-based MVPs Incubator-ready team
Innovation activities	Activities/training	Lean, design thinking, hackathons, incubators, outposts, maker spaces	Innovation demos, prototypes People
Individual innovation	Heroic	Innovators alliance	One-off successes Frustration with system
	PROCESS	EXAMPLES	DELIVERABLE

One example of moving up the Innovation Stack is that the NSA I-Corps team has recently shifted their focus from working with individual teams to helping organizations deploy the methodology at scale. In true lean startup fashion, they are actively testing a number of approaches with a variety of internal organizations ranging in size from 40 to 1000+ people.

However, without a mandate for actually delivering innovation from senior leadership, scaling innovation across the company/agency means finding one group at a time – until you reach a tipping point of recognition. That is when leadership starts to pay attention. Our experience to date is that 25- to 150-person groups run by internal entrepreneurs with budget and authority to solve critical problems are the right place to start to implement this. Finding these people in large companies/agencies is a repeatable process. It requires patient and persistent customer discovery inside your company/agency to find these groups and deeply understand their pains/gains and jobs to be done.

6. CONCLUSION

Companies/agencies have adapted and adopted startup innovation tools (lean, design thinking, user-centric design, business model canvas, etc.) as well as startup activities and team-based innovation (hackathons, incubators, kickstarters, I-corps, FastWorks, etc.). However, because they are disconnected from the mainstream business/mission model very few have been able to scale past a demo/prototype. Use the Innovation Stack and start working directly with operating groups. More importantly, find those who realize “they can’t go on like this,” and/or “we need to do a lot more stuff,” and/or “something changed, and we rapidly need to find new ways to do business,” and you will end up delivering stuff that matters instead of coffee cups.

© 2021 The Capital Markets Company (UK) Limited. All rights reserved.

This document was produced for information purposes only and is for the exclusive use of the recipient.

This publication has been prepared for general guidance purposes, and is indicative and subject to change. It does not constitute professional advice. You should not act upon the information contained in this publication without obtaining specific professional advice. No representation or warranty (whether express or implied) is given as to the accuracy or completeness of the information contained in this publication and The Capital Markets Company BVBA and its affiliated companies globally (collectively "Capco") does not, to the extent permissible by law, assume any liability or duty of care for any consequences of the acts or omissions of those relying on information contained in this publication, or for any decision taken based upon it.

ABOUT CAPCO

Capco is a global technology and management consultancy dedicated to the financial services industry. Our professionals combine innovative thinking with unrivalled industry knowledge to offer our clients consulting expertise, complex technology and package integration, transformation delivery, and managed services, to move their organizations forward.

Through our collaborative and efficient approach, we help our clients successfully innovate, increase revenue, manage risk and regulatory change, reduce costs, and enhance controls. We specialize primarily in banking, capital markets, wealth and asset management and insurance. We also have an energy consulting practice in the US. We serve our clients from offices in leading financial centers across the Americas, Europe, and Asia Pacific.

WORLDWIDE OFFICES

APAC

Bangalore
Bangkok
Gurgaon
Hong Kong
Kuala Lumpur
Mumbai
Pune
Singapore

EUROPE

Berlin
Bratislava
Brussels
Dusseldorf
Edinburgh
Frankfurt
Geneva
London
Munich
Paris
Vienna
Warsaw
Zurich

NORTH AMERICA

Charlotte
Chicago
Dallas
Hartford
Houston
New York
Orlando
Toronto
Tysons Corner
Washington, DC

SOUTH AMERICA

São Paulo



WWW.CAPCO.COM



CAPCO