

# Education Ecosystem of the Future...?



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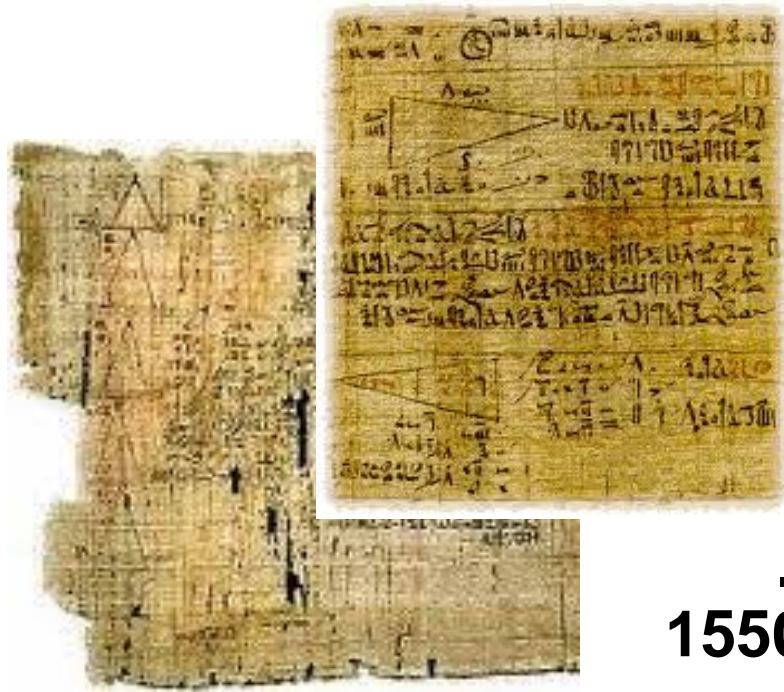
**Dr. Jan-Martin Lowendahl**

Distinguished VP Analyst  
jan-martin.lowendahl@gartner.com



# A Perspective on Trends ... No New Ideas, Only New Technologies?

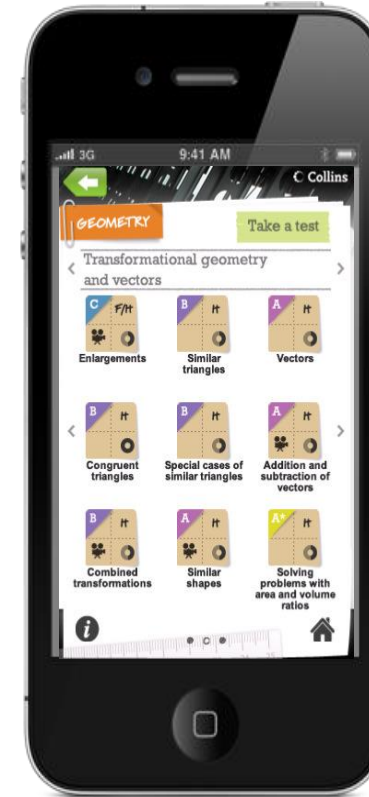
Passing the test ...



Civil Servant Test Prep  
Ahmes (Rhind) Papyrus

... in  
1550 BCE ...

... or in  
2011



GCSE (~SAT) Revision  
Collins iPhone App

Everything is a Remix: <https://www.youtube.com/watch?v=nJPERZDfyWc>

# The Oldest Central SIS?



***Jinshi (PhD?) degrees awarded  
from 605 (?) to 1905 CE***

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# Themes For Today

**Changing Societal Needs  
Requiring**

**Education Evolution**

**Credentials as Currency**

**Motivating Measures**

# The Three Trending Talent Troubles...

- **Skill Scarcity**

- The available workforce has never been larger, yet people are unemployed and enterprises increasingly find that the the talent they seek is scarce

- **Skill Gap**

- Our traditional education institutions improve linearly, leading to an increasing gap between learner outcomes and enterprise needs – especially as people enter the workforce.

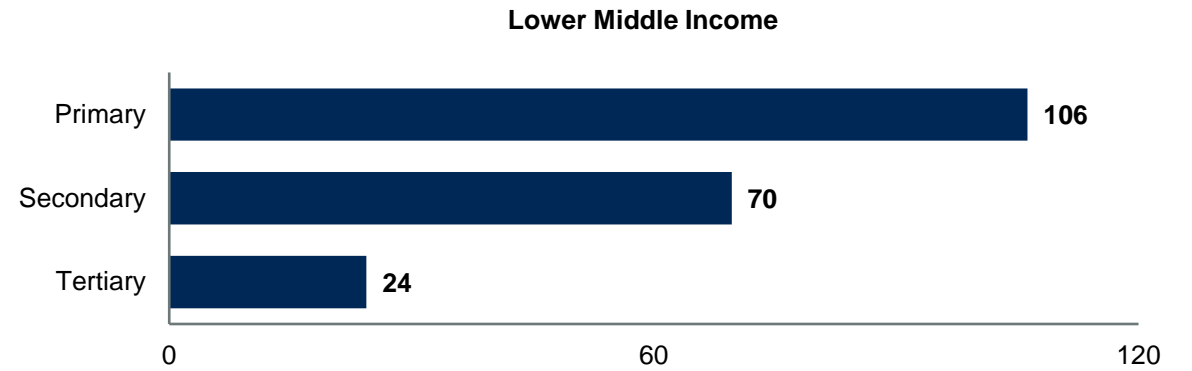
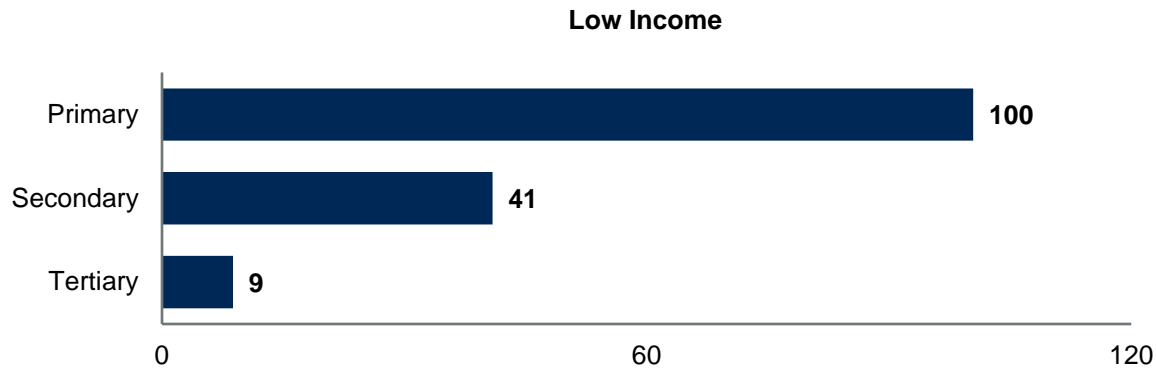
- **Skill Half-Life**

- Decreasing half-life of skills increases the skill gap both between traditional education outcomes and enterprise needs as well as between existing workforce skills and evolving enterprise needs

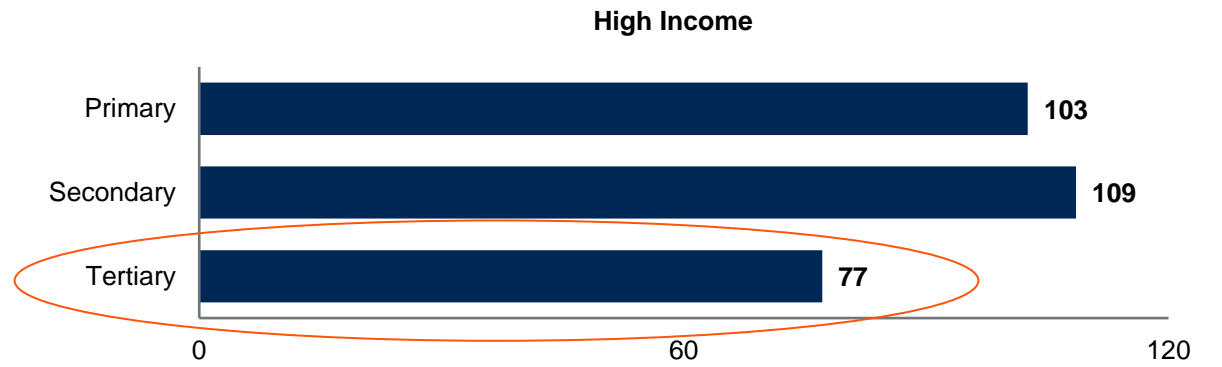
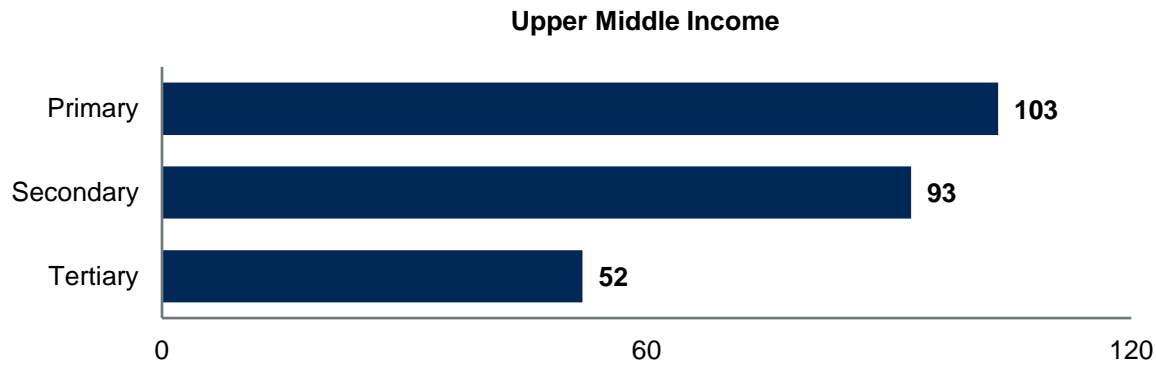
**... (Higher) Education Is Needed More than Ever!**

# Gross Enrollment Ratio by Level of Education and Income Level

Gross Enrollment Ratio, 2015 (%)



Low- and Lower-Middle-Income Countries See a Big Drop-Off in Enrollment Between Primary and Secondary School



Source: World Bank. 2018. Atlas of Sustainable Development Goals 2018: World Development Indicators. Washington, D.C.: World Bank. doi: 10.1596/978-1-4648-1250-7. License: Creative Commons Attribution CC BY 3.0 IGO. ID: 389437

# **Ever-rising more complex skills demand**

The **total number of skills required**  
for a single job is **increasing by**

**10%** year over year



33%

of the skills that were present in an average job posting in 2017 ...

**... will not be needed by 2021**

# **Education Needs To Evolve or ...**

**Too slow**

**Too expensive**

**Too episodic**

**Too detached**

**Too rigid**

Current predictive approach to skills development result in employees only applying

**37%**

of the skills they learn

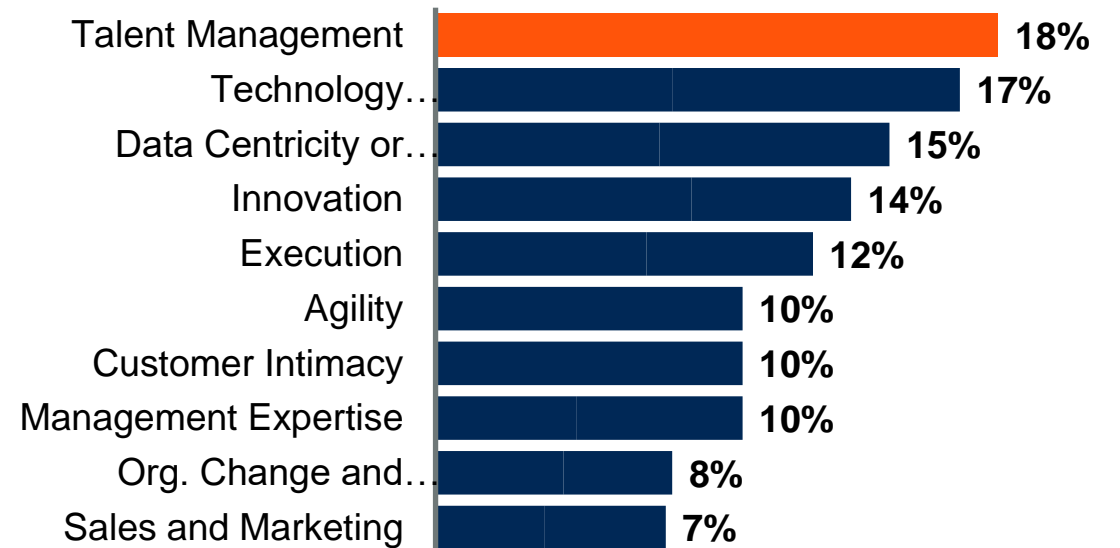
# Talent Management Has Risen to a Top CEO Concern

**79%** of CEOs worry about availability of skills, it's a **top 3 business priority** concern today.\*

CEOs view **reskilling and upskilling** as the primary approaches to **close the skills gap**.\*



## Top Organization Competencies Most in Need of Improvement to Deliver Strategy



\*Source: "Upskilling for a Digital World," PwC CEO Survey.

Source: 2019 Gartner CEO and Senior Business Executive Survey  
Q: What two organizational competencies does your company most need to develop or improve to excel in delivering on your business strategy? n = 473. Base: All respondents. ID: 387101

Dynamic skilling approaches result in employees applying

**75%**

of skills they learn

**Sprints**

**Value Stream**

**Continuous**

**Embedded**

**Pivots**

Agile Learning

Earning Curve



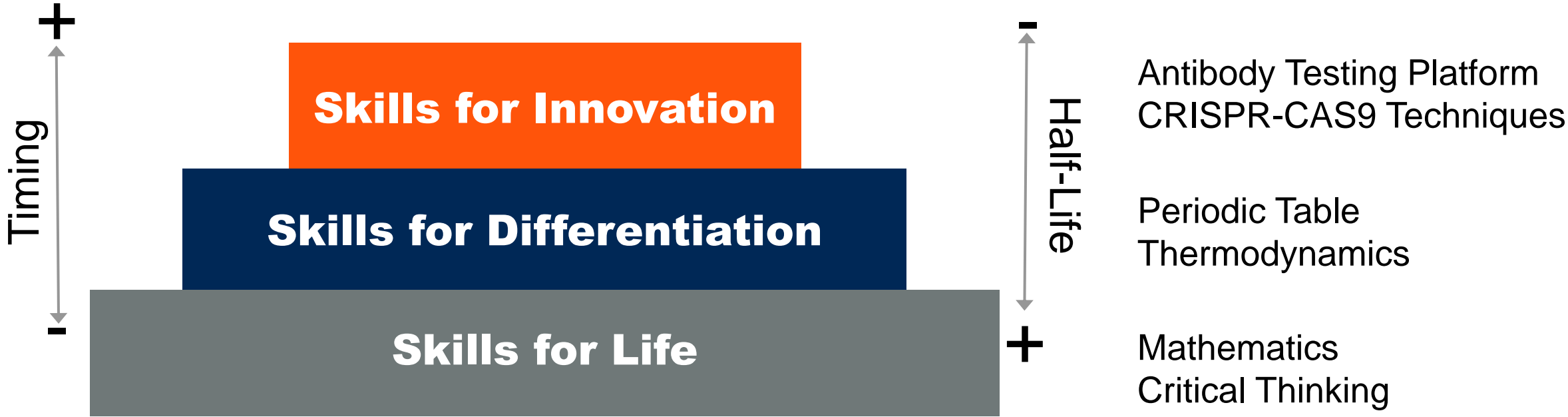
**Self-  
Directed**



**Strategy  
Connected**

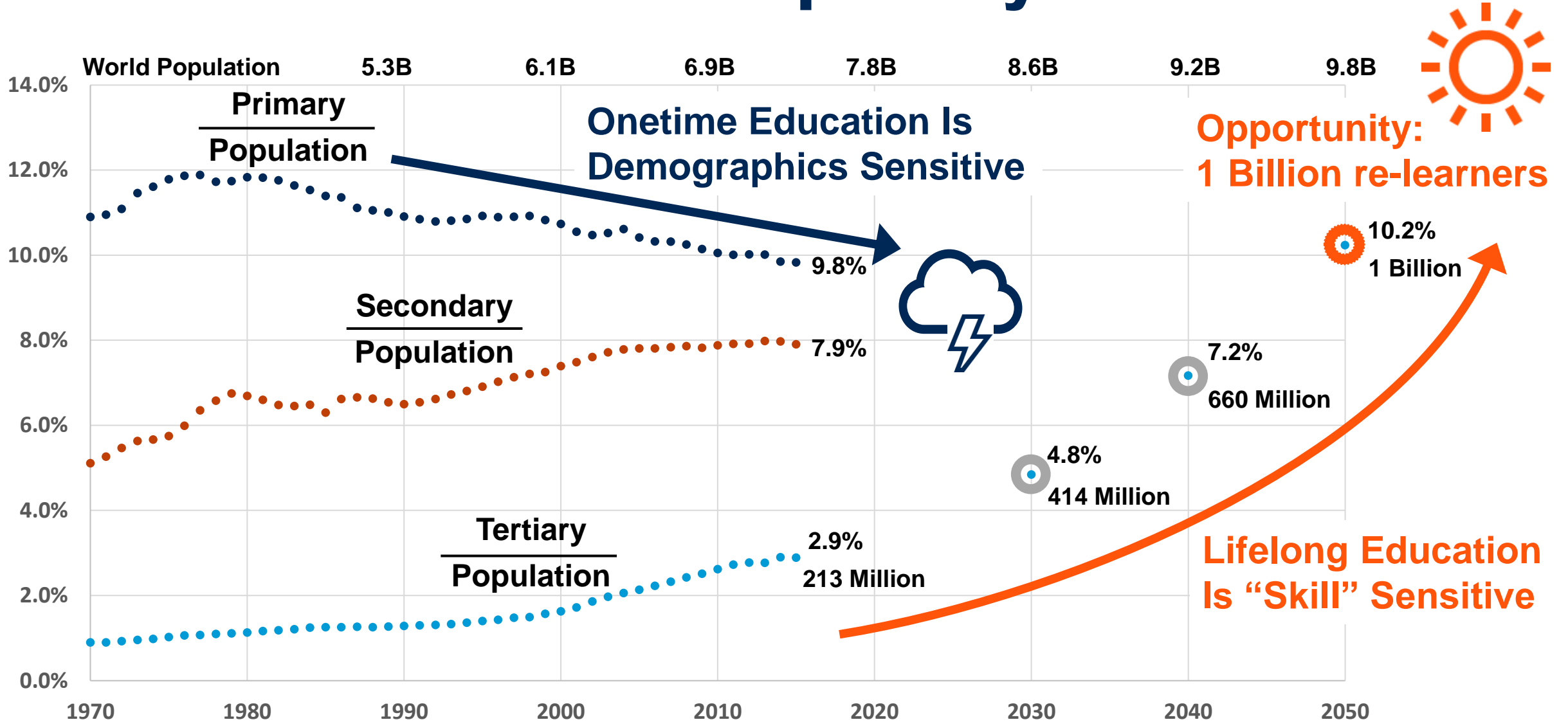
Learning Curve

# Half-Life of Skills Requires Higher Education to Pace-Layer the Curriculum



**“AI skills are needed right now ...  
it could be 2025 before many students will find an AI course in their school ...”**  
*Gary Beach, Author, U.S. Technology Skills Gap*

# From Cohort KPIs To Competency KPIs



Source: World Bank EdStats, UN, Angel Calderon RMIT



# Higher Education Is NOT The Only Kid on The Block

## Tech Vendor Platforms

## Learning Marketplaces

## Learning Experience Platforms



# Abundant Affordable Learning



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Source: \*Representative vendors only

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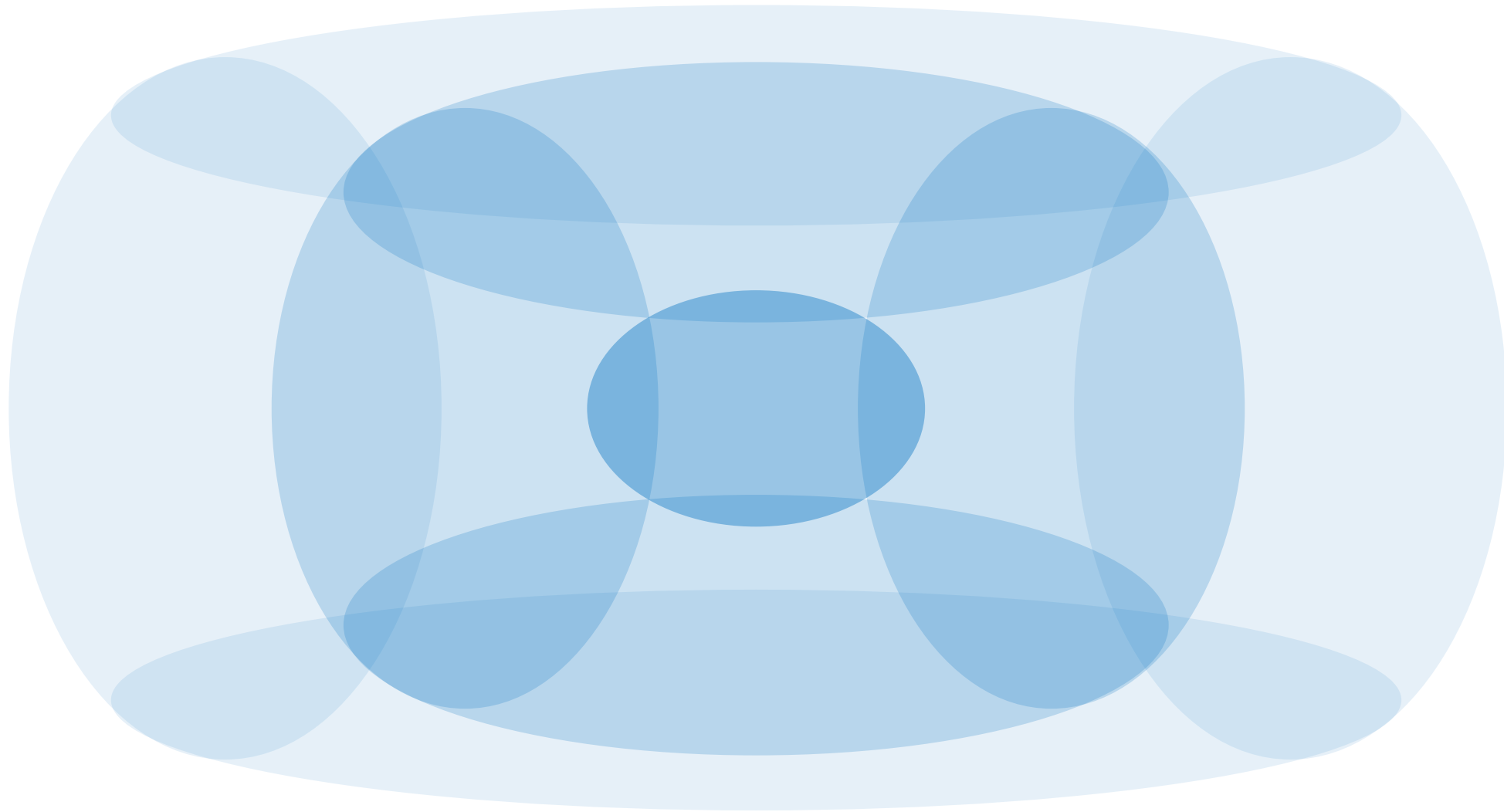
# Ecosystem View

# Please, remember...

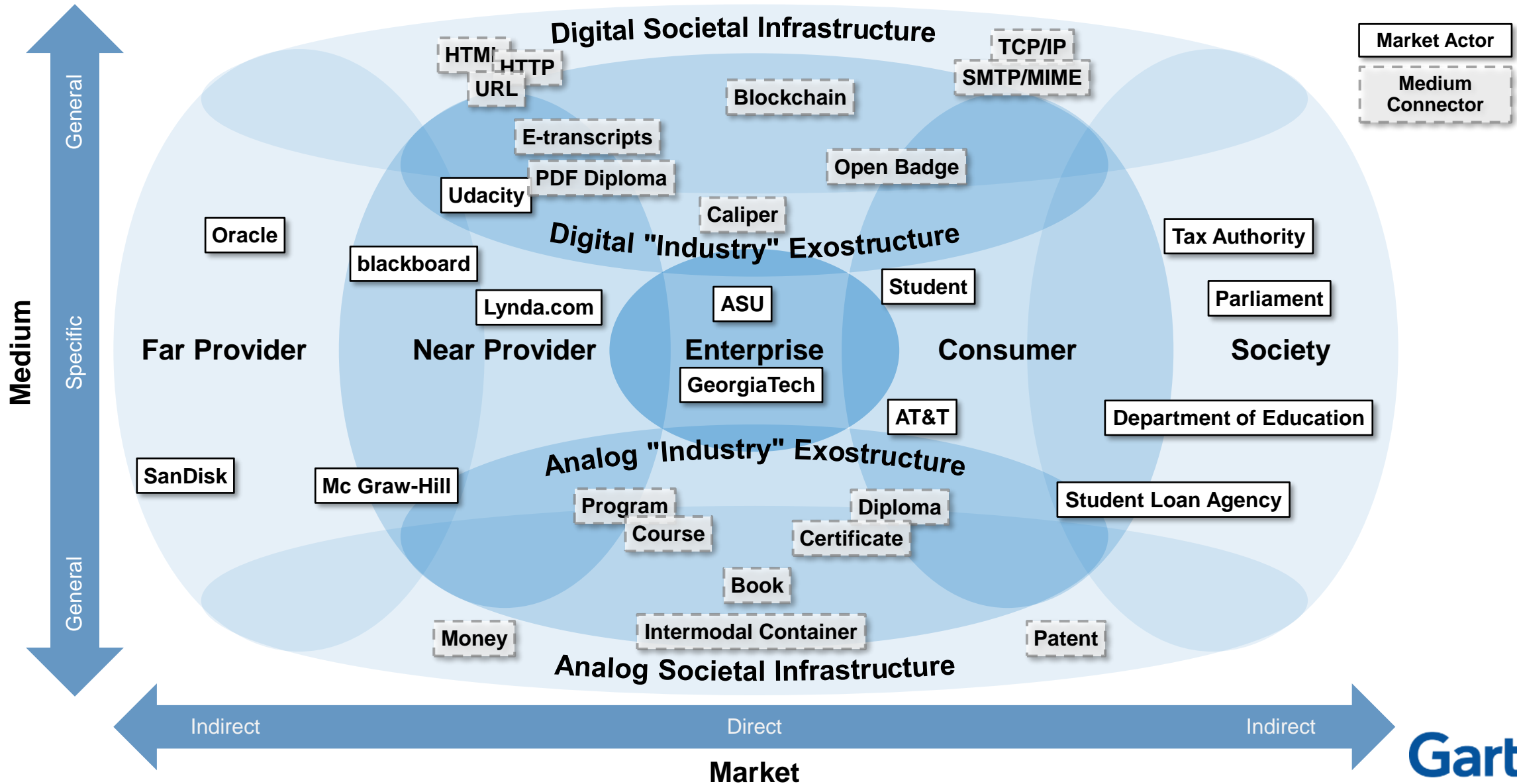
“Essentially, all models are wrong,  
but some are useful.”

George Box English Statistician, 1919 – 2013

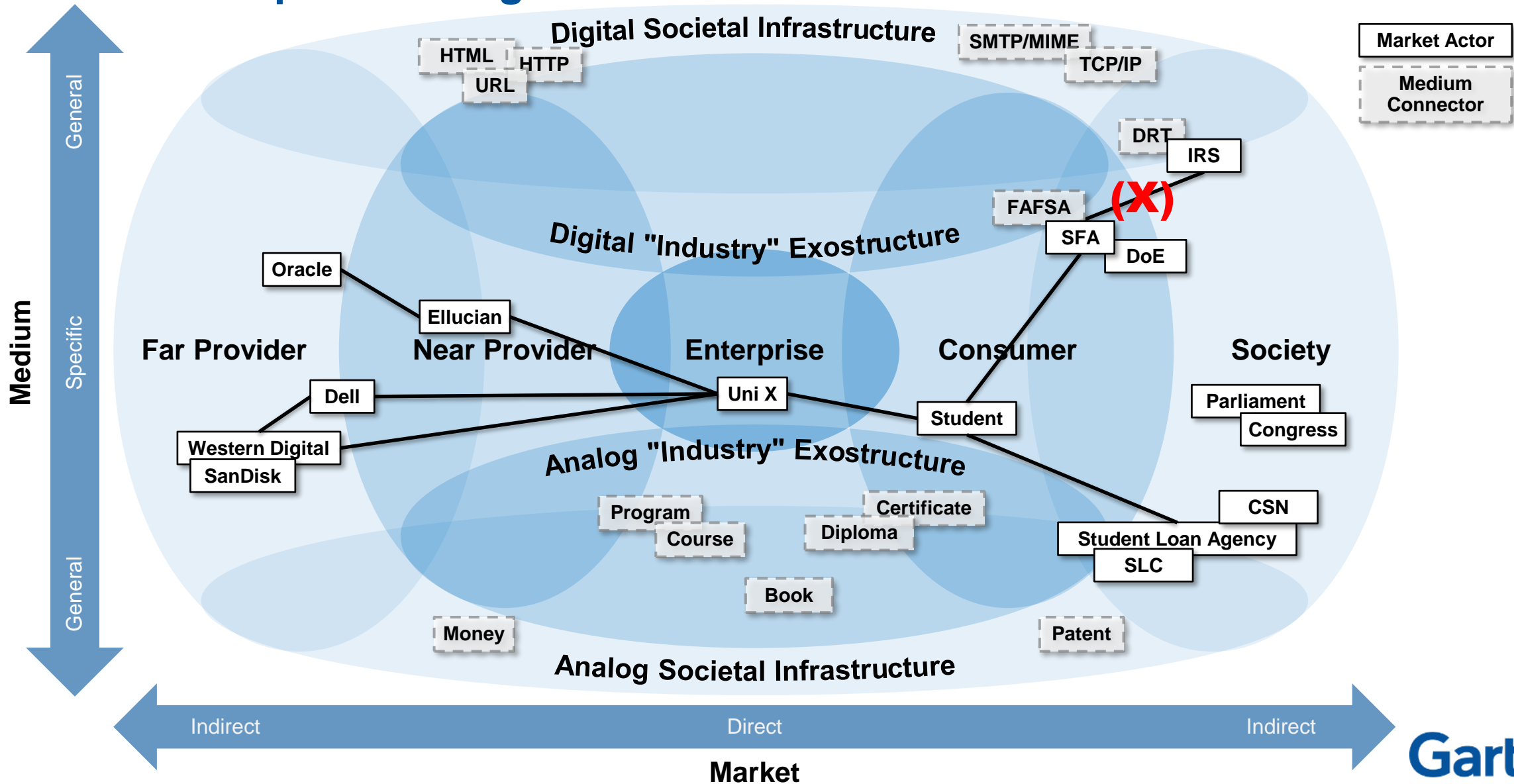
p. 424 Box, G. E. P., and Draper, N. R., (1987), *Empirical Model Building and Response Surfaces*,  
John Wiley & Sons, New York, NY.



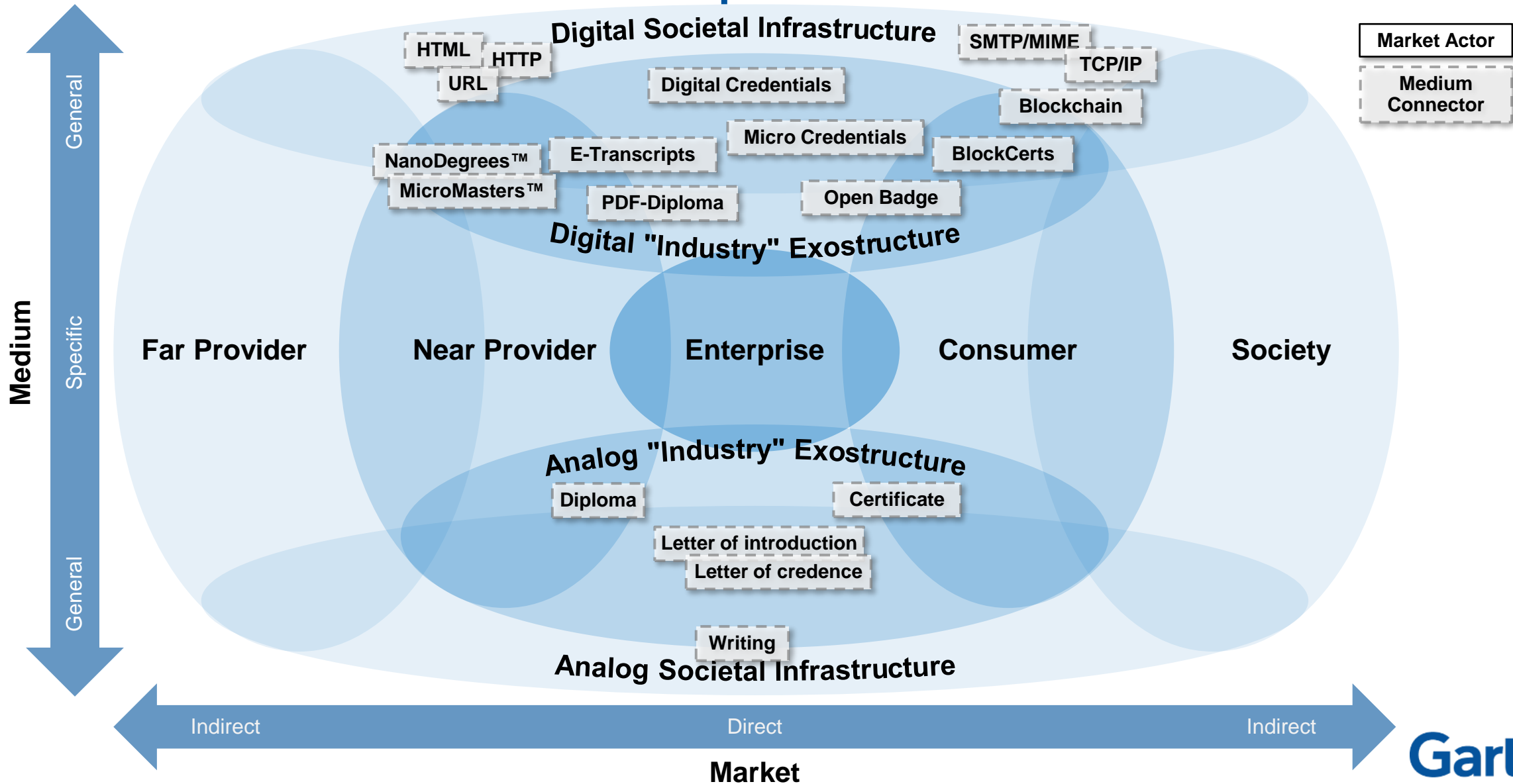
# Ecosystem



# The Market Domains: From Create to Consume and Back Again via Regulate — An Example Showing the Extent of the Market Dimension



# The Medium Domains — Our Analog Origin! And Digital Destiny? Evolution of the Credential Concepts in the Medium Axis



# Credentials As Currency – Trustworthy & Portable?





# Proof of Life-Long Learning: Learning How To Learn



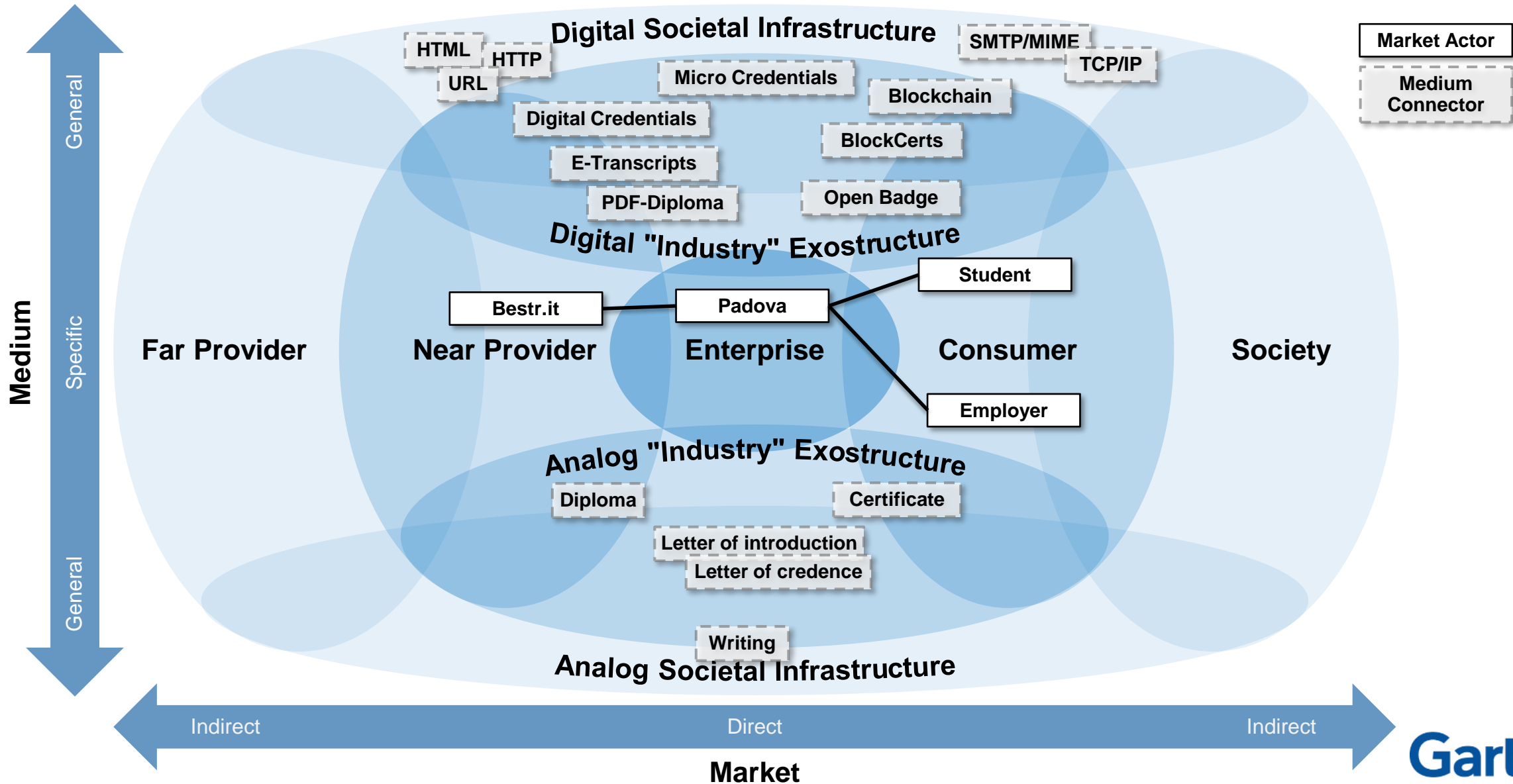
 **Graham Waller**  
Research VP at Gartner

### Licenses & Certifications

 **Learning How to Learn**  
Coursera  
Issued May 2020 · No Expiration Date  
[See credential](#)



# Credentials As Currency – Creating the Exchange



# .Bestr a Key actor in the Italian Credentials Ecosystem

## Companies

Bestr is for companies needing and building valuable competencies.

JOIN



### Clear competencies

Read digital credentials presented by candidates to know which competencies they have been recognized by their training institutions.



### Verified competencies

Use Badges and Blockcerts to verify your candidates' competencies: digital credentials are instantly verifiable.



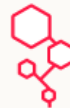
### About the person

Digital credentials can include unique meaningful details, specific for a single learner: the topic of the thesis, performance data, project material.



### 100% digital

Instantly autonomously verify the authenticity of a certificate - whenever you want.



### Trust network

If you don't know the issuing organization, you can refer to the endorsements made by other organizations.



### Endorsing Badges

Find Badges describing the competences you need - and endorse them.

<https://bestr.it/>

Gartner®

# .Bestr a Key actor in the Italian Credentials Ecosystem

## University and Research Body

Bestr is for Universities and Research Bodies providing real learning - not just transcripts. Because they can express the value hidden behind a degree, behind extracurricular activities, behind publications - thus improving how the institution is perceived and contributing to their learners' employability.

JOIN

**.Bestr**



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA

Founded 1222  
211 Badges



Master's  
Degree, Law:  
268 issued

<https://bestr.it/>



### Valorize

Highlight competencies that students develop for their degree: unbundle the degree and make it clear what competencies it implies.



### Complete

Highlight transversal competencies that grow in your institution.



### Certify

Provide your students with digital secure portable certificates - talking certificates.



### Recognize

Recognize automatically in the student's career those of his/her experiences that you deem valuable.



### About the person

Digital credentials can include unique meaningful details, specific for a single learner: the topic of the thesis, performance data, project material.



### Integrate

Provide information about your learner directly from your information system.

**Gartner**

# .Bestr a Key actor in the Italian Credentials Ecosystem

## Learner

A learner is always learning, always growing, always going forward on a professional path.

The life-long & life-wide learner is the core of Bestr: at the university or on the job, at school or for fun, the learner gets competencies continuously - on Bestr they can be valorized and certified, independently from the learning context, as the learner meets companies and trainers who value them.

JOIN

# .Bestr



### Opportunities

It will be easier for employers and institutions to understand the value of your competencies.



### Portfolio

Describe your professional profile based on competencies and evidences.



### Verifiability

With digital credentials your competencies are easily verifiable.



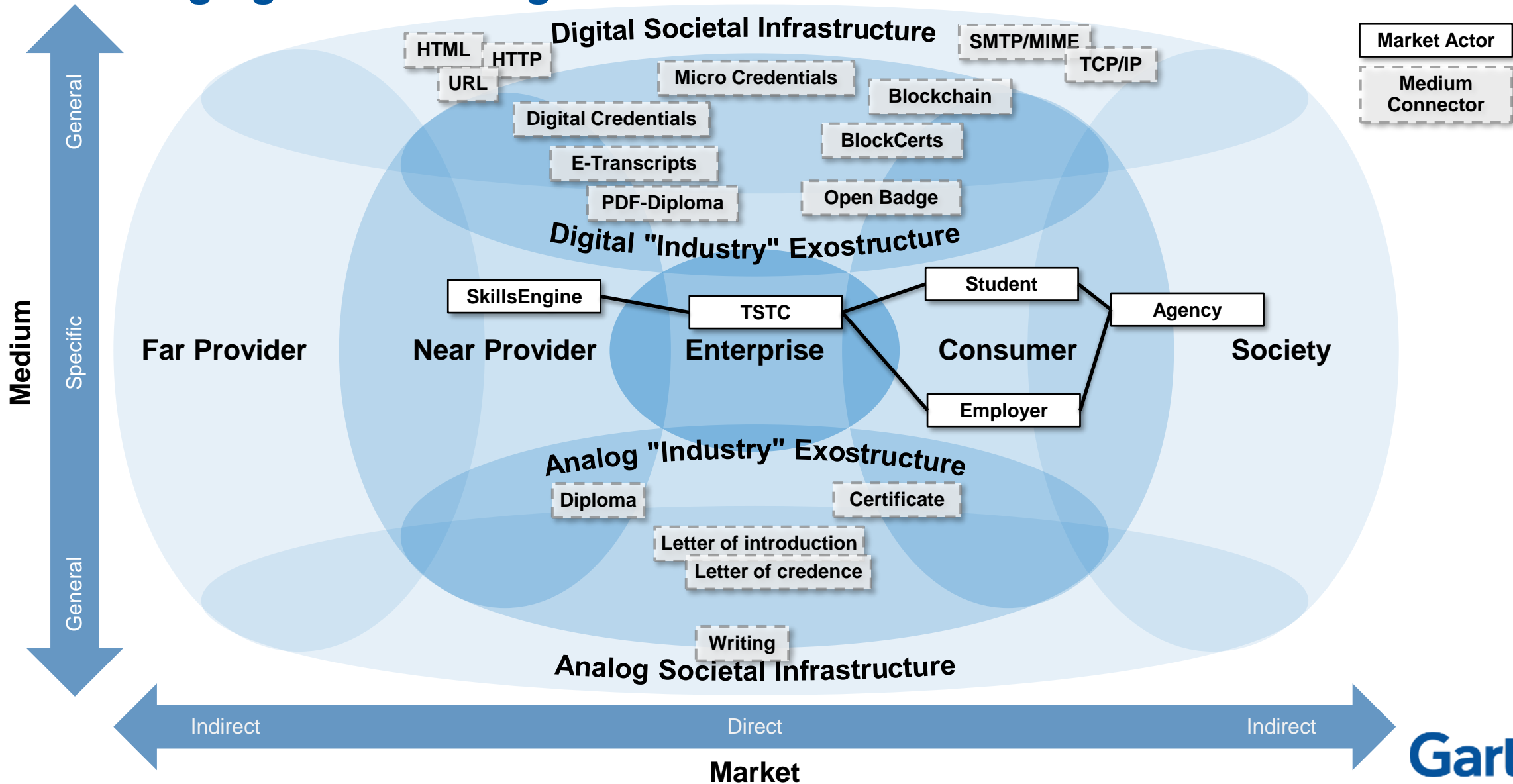
### About the person

Digital credentials can include unique meaningful details about yourself.

<https://bestr.it/>

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# Credentials As Currency – Creating the Currency & Changing The Exchange Rate



# Building Skills With Your Ecosystem

STEP ONE

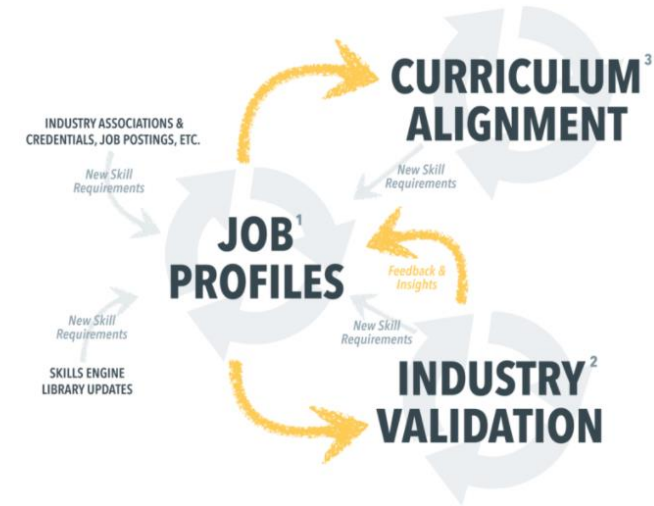
## Create Job Profiles

Modernize your job analysis with Calibrate's highly customizable Job Profiles. Utilize more than 1,000 customizable templates to get you started.



## Stay Relevant

Industry requirements change and occupations evolve. Calibrate keeps you relevant today and updated for tomorrow.



STEP TWO

## Validate with Industry

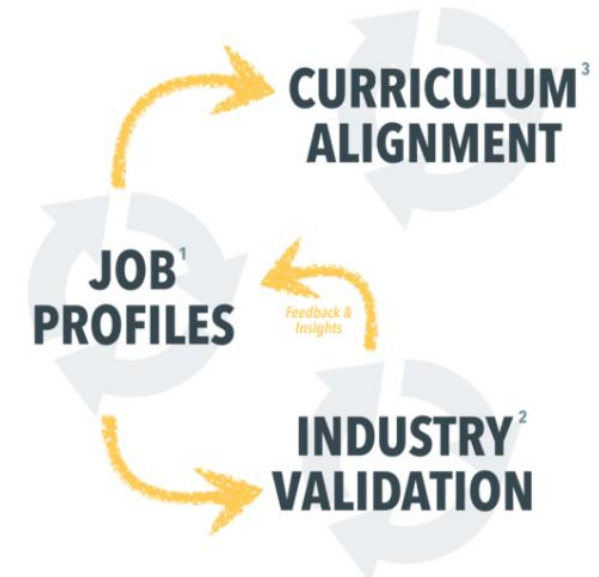
Collect feedback and gain insights directly from Industry Experts. See which skills are most critical, what's missing, and when skills are less relevant.



STEP THREE

## Align Your Curriculum

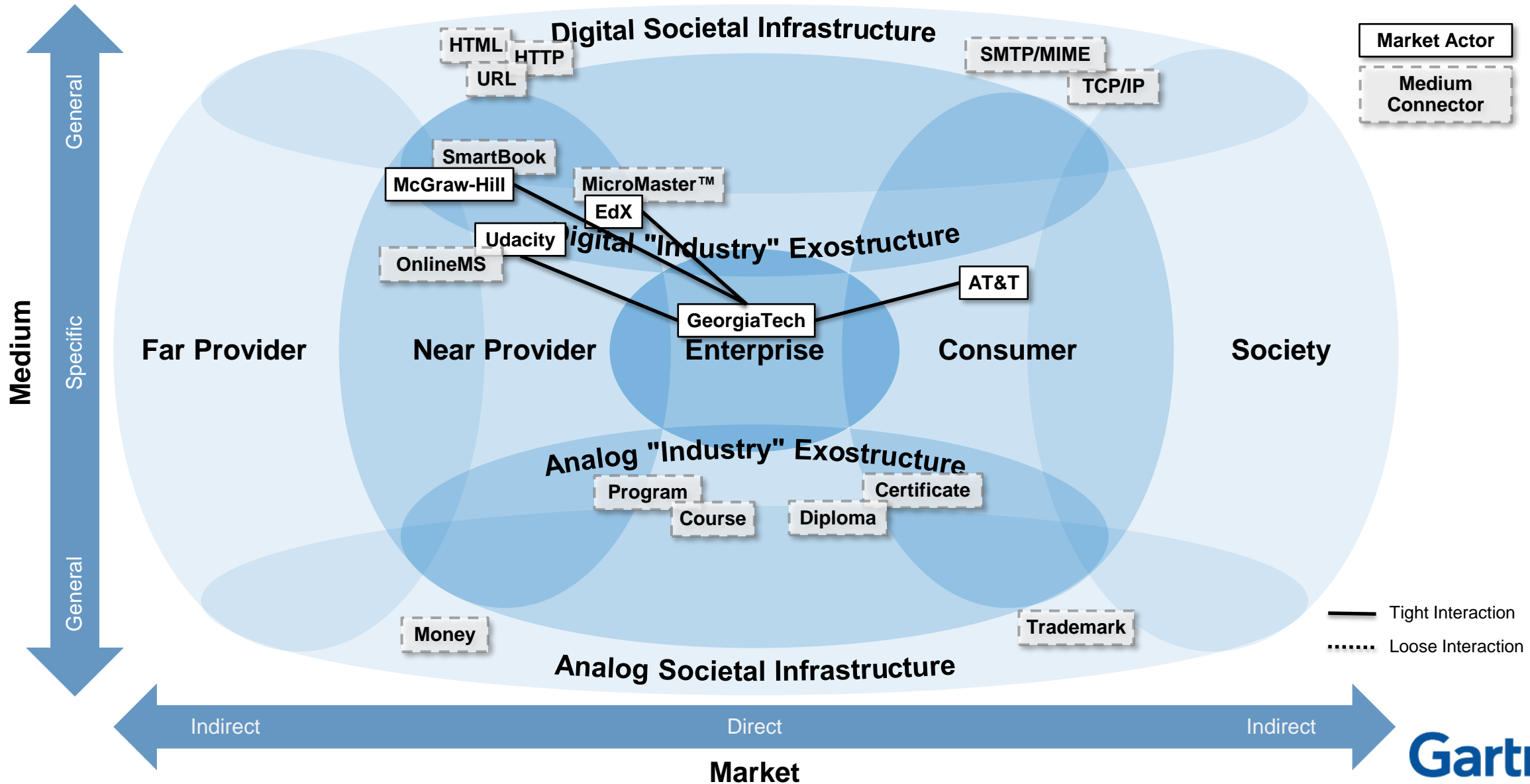
Directly map curriculum to validated skill profiles based on industry needs. Calibrate eliminates lingering skill gaps so students are more employable.



 SkillsEngine

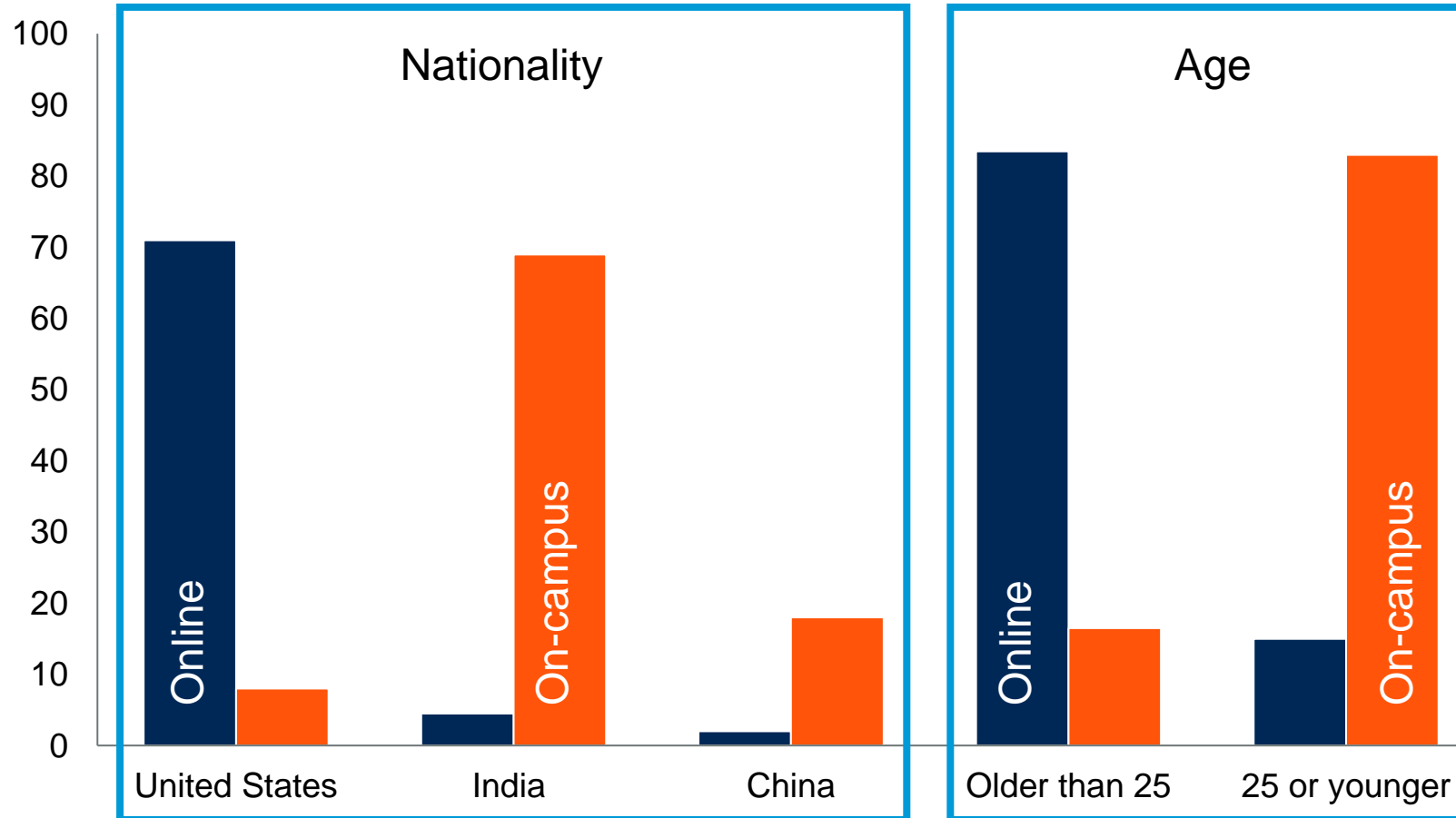
<https://skillsengine.com/>

# Higher Education Value Chain Examples





# Who Applies? Georgia Tech Online vs. On-Campus



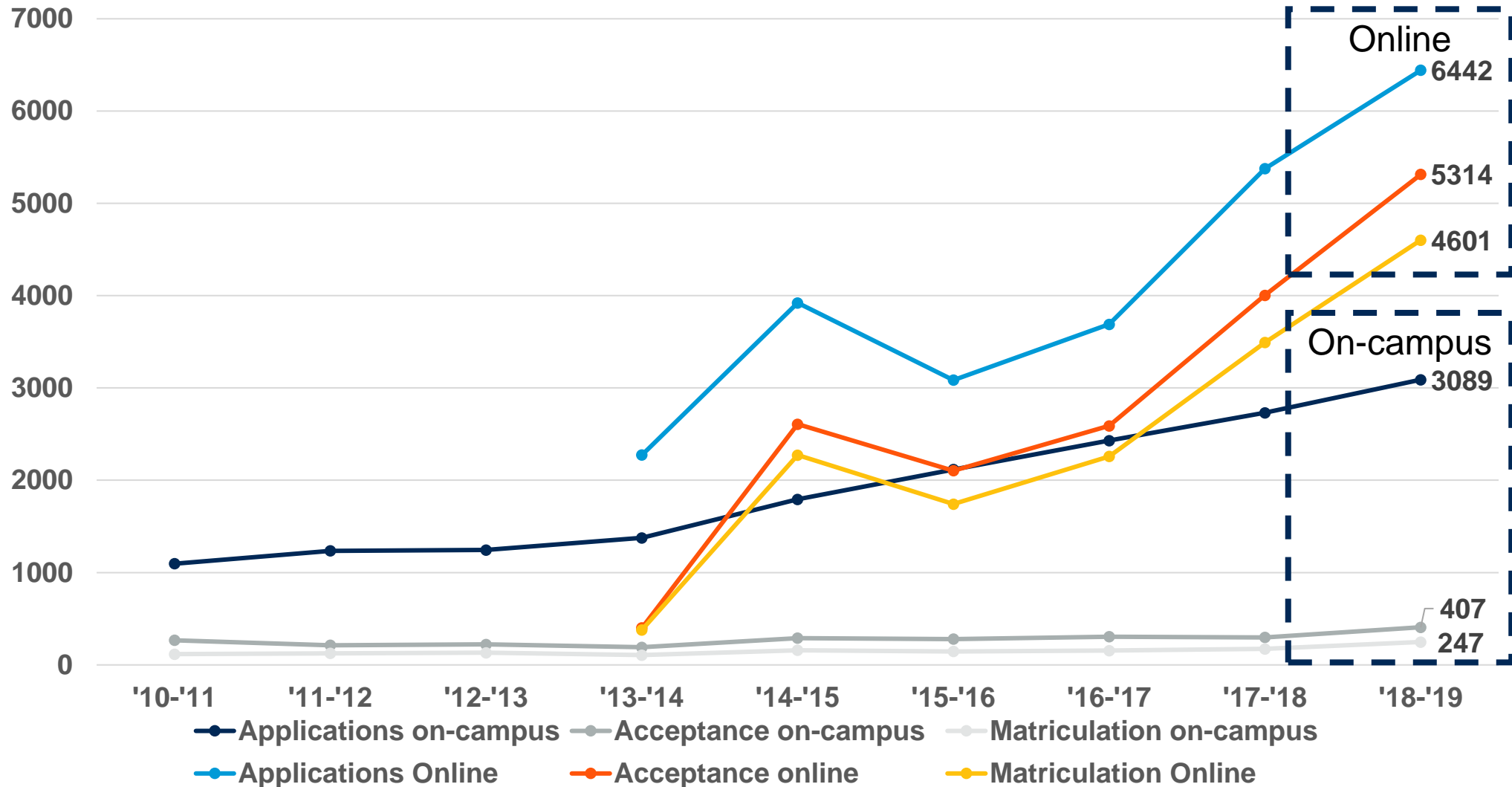
“These findings indicate that the higher education market has been failing to meet demand for midcareer online options”

Source: An Elite Grad-School Degree Goes Online  
By J. Goodman, J. Melkers and A. Pallais

# Digital Ecosystem Scales

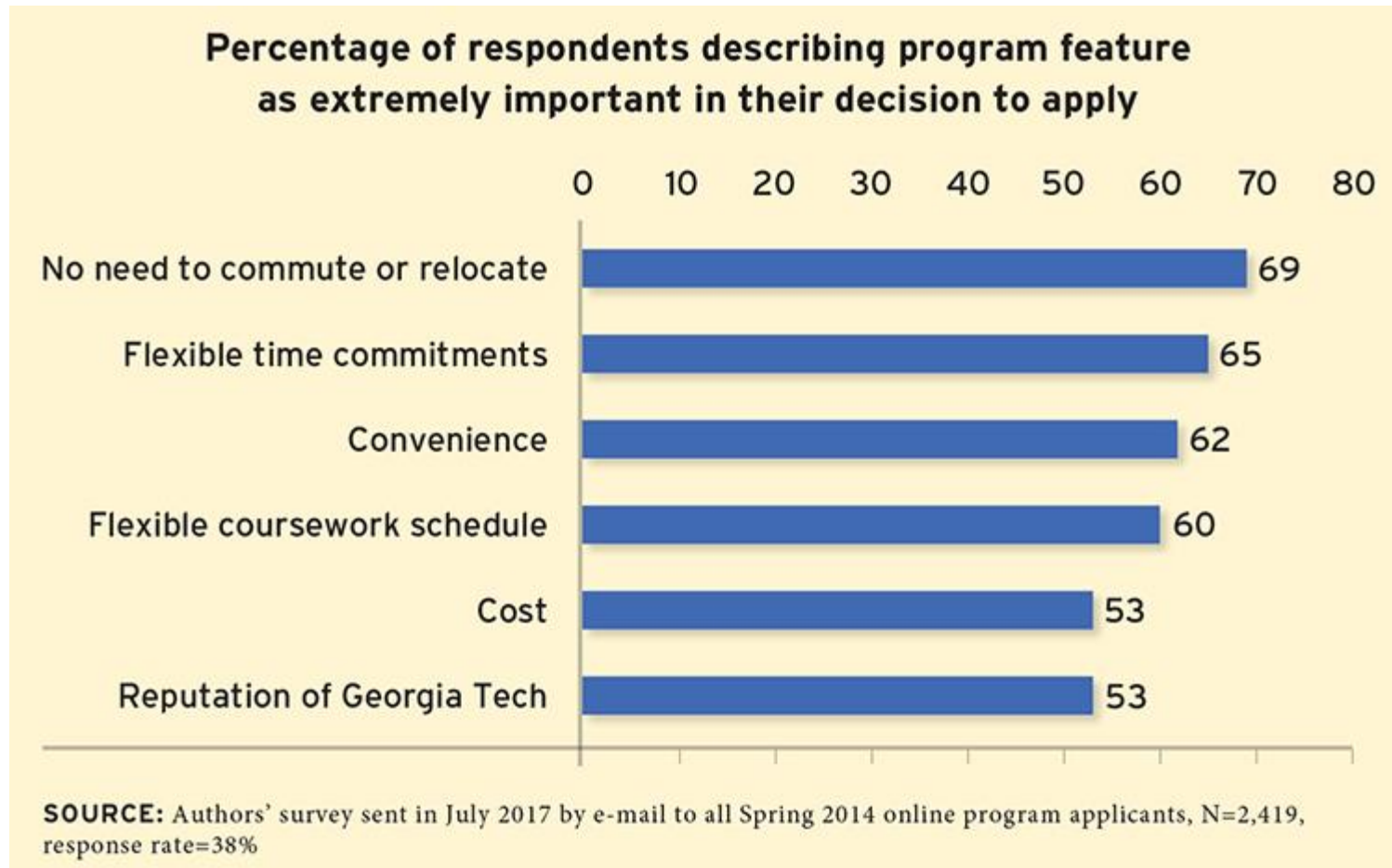
The program's mission statement:

“the program will admit as many students as meets the admissions requirements.”

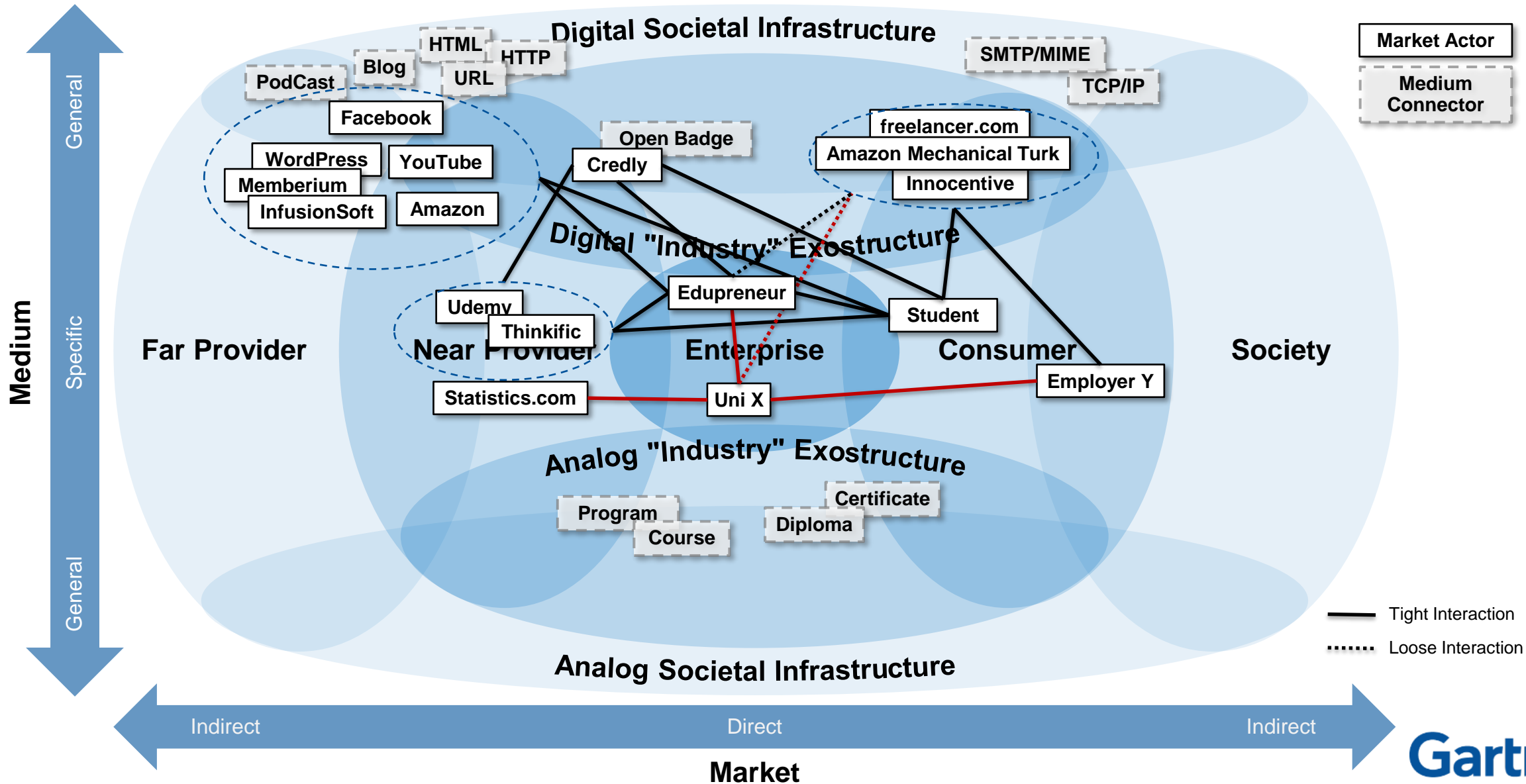


Application, acceptance and matriculation numbers for the online and on campus CS program at GeorgiaTech

# Why GeorgiaTech Computer Science Online?



# The Edupreneur Value Web



# The University Learning Store – Getting Started With LLE



Sign In

HOME | CATALOG | PARTNERS | HOW IT WORKS | ABOUT | FAQ | CONTACT | BLOG | NEWS



Developed and awarded by:



# The University Learning Store – Taxonomy of Microcourses



Sign In

HOME | CATALOG | PARTNERS | HOW IT WORKS | ABOUT | FAQ | CONTACT | BLOG | NEWS

## Catalog

Shop courses by:

- POWER SKILLS
- TECHNICAL SKILLS
- CAREER ADVANCEMENT
- COMPLIANCE
- ALL SKILLS

Search course keywords:

Filters[-]

Filter by:

Clear all filters

Institution [-]

- Georgia Institute of Technology
- University of Washington Continuum College
- University of California Irvine
- University of Wisconsin Extended Campus
- University of Wisconsin - La Crosse

Category [-]

- Power Skills
- Technical Skills
- Career Advancement
- Compliance

Price [-]

- \$0 - 50
- \$51 - 100
- \$101 - 150



Applying Best Practices for Email Communication in the Global Workplace

Georgia Institute of Technology

Learn More >



Business Meeting Etiquette

University of Washington Continuum College

Learn More >



Business Presentations: The Persuasive Speaker

Georgia Institute of Technology

Learn More >



Communicating & Deliberating in Work Teams

University of Wisconsin Extended Campus  
University of Wisconsin - La Crosse

Learn More >



Communicating Professionally Via Phone

University of Wisconsin Extended Campus



Composing Clear And Concise Reports

University of Wisconsin Extended Campus



Creating a Stakeholder Management Plan for Projects

University of Wisconsin Extended Campus



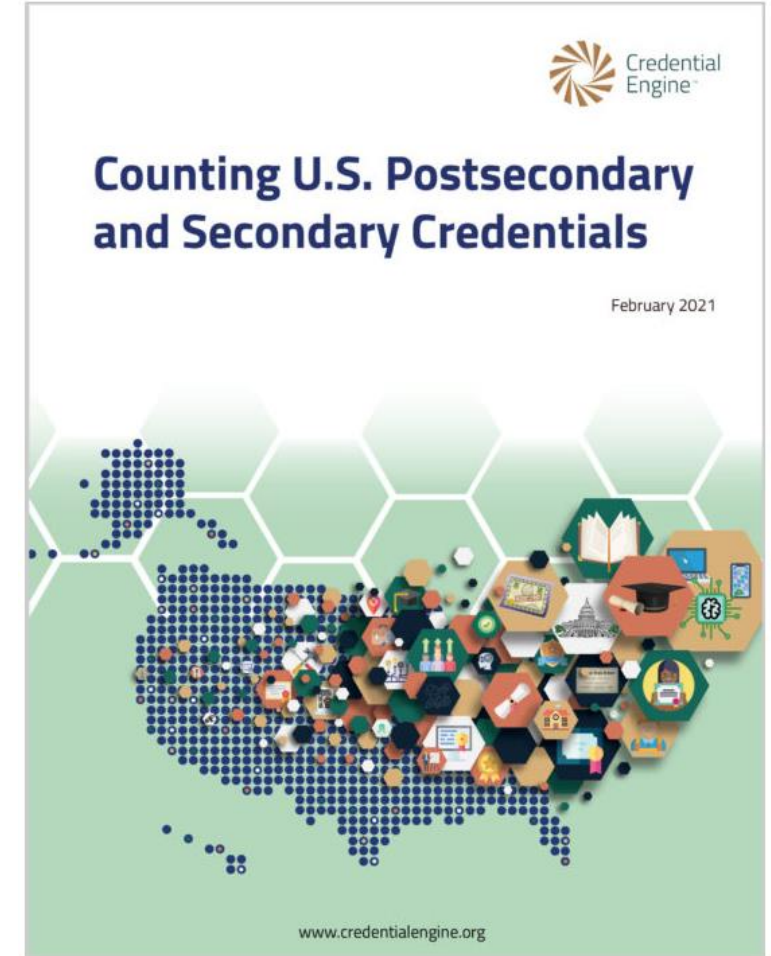
Creating a Work Breakdown Structure (WBS) in a Project

University of Wisconsin Extended Campus



# The Credential Landscape Today

- “Vast and Growing - Confusing and Inefficient”
  - **967,734+** unique credentials in the U.S. alone. [Read the report](#)
- The report identifies [967,734 unique credentials in the U.S.](#) in 16 detailed credential categories across four types of credential providers:
  - Postsecondary educational institutions – **359,713** degrees and certificates
  - Massive open online course (MOOC) providers – **9,390** course completion certificates, micro-credentials, and online degrees from foreign universities
  - Non-academic providers– **549,712** badges, course completion certificates, licenses, certifications, and apprenticeships
  - Secondary schools – **48,919** diplomas from public and private secondary schools



# Lumina Foundation Ecosystem Overview

- 1 Credential Transparency**
- Credential Engine
  - Credential Registry
  - Open-platform schemas and languages

- 2 Alignment and Alliances**
- State/regional projects
  - Military (Dept of Defense, Navy)
  - Public/private ROI
  - Credentials of value
  - Aligning bachelor's degrees and industry-recognized certifications
  - T-Profile builder

- 3 Drive and Connect Systems**
- Credential Engine: Credential Registry Learn and Build Summit Series (apps)
  - T3 Innovation Network (10 pilot projects)
  - Workcred: Data-sharing among organizations awarding non-degree credentials
  - Non-Degree Credential Research Network
  - Understanding the landscape of industry certifications

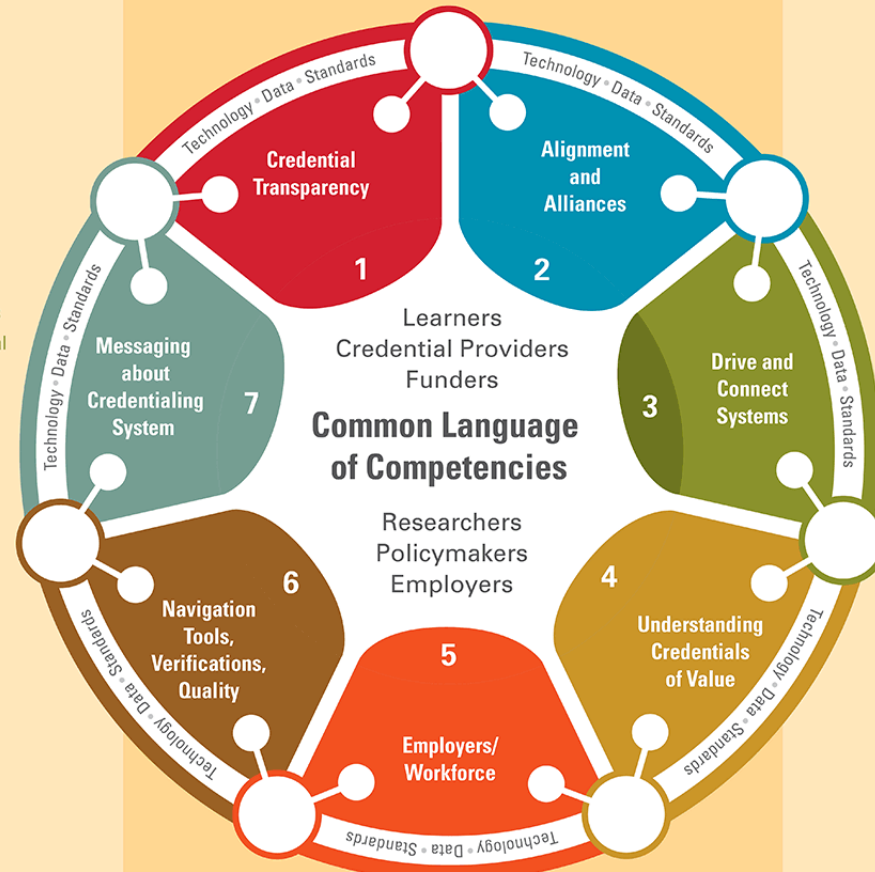
- 4 Understanding Credentials of Value**
- State identification of credentials of value
  - Public-private education/credentialing data infrastructure
  - Credential Registry use in Eligible Training Provider List and other eligibility determinations
  - Incremental higher education credentialing system framework
  - SocialTech's unmucl.com

- 5 Employers/Workforce**
- Jobs Data Exchange
  - Talent Pipeline Management Initiative
  - Competency/skills/competency calibrator
  - Hiring for competencies/skills
  - Workforce Partnership Initiative

- 6 Navigation Tools, Verification Quality**
- Digital learner records
  - The Quality Assurance Commons
  - Google Education and Pathways Search

- 7 Messaging about Credentialing System**
- Gallup surveys
  - Media messaging
  - Research: number of credentials

## Stakeholders and Key Initiatives for a Connected Learn-and-Work Ecosystem



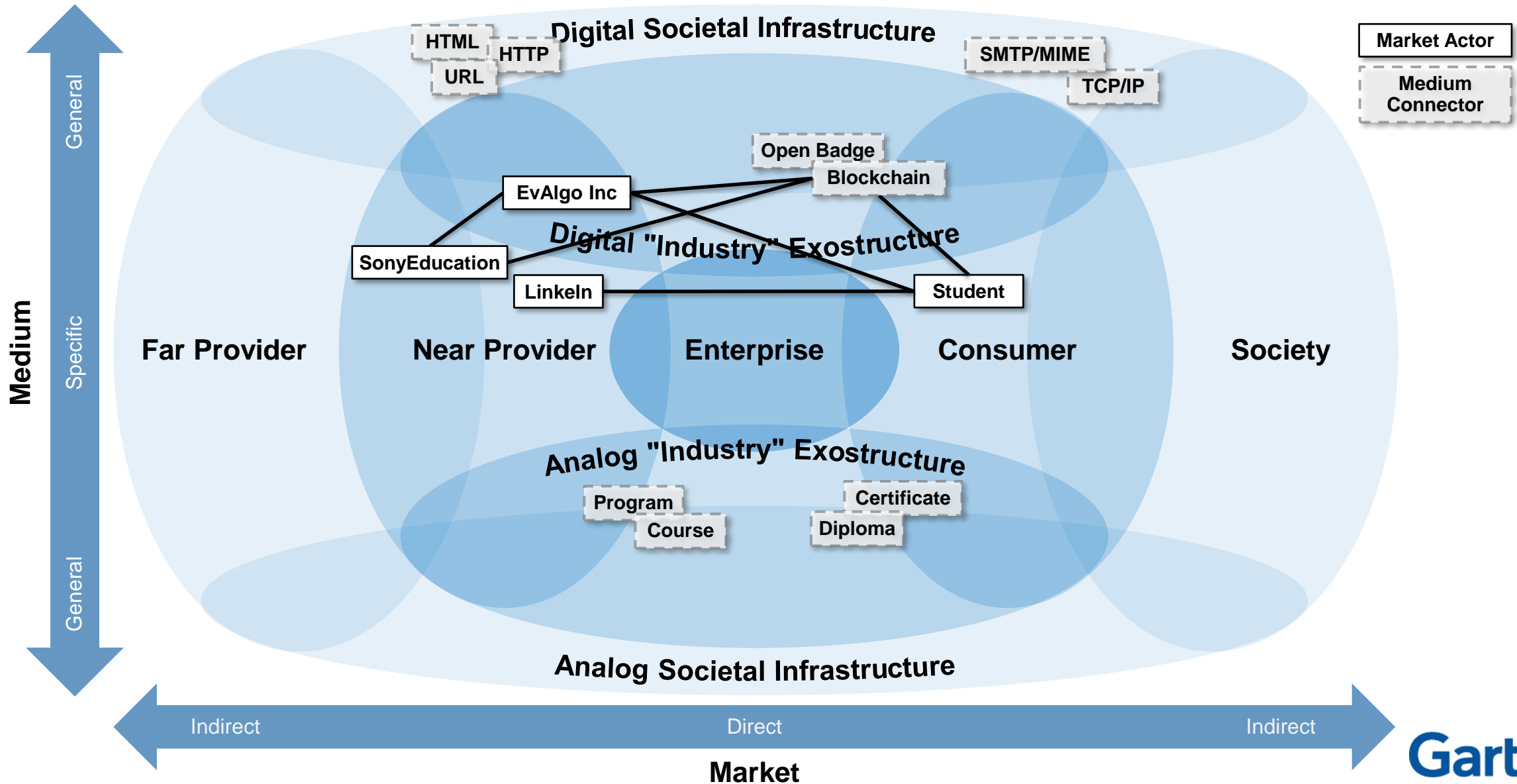
January 2020

<https://www.luminafoundation.org/campaign/learn-and-work-ecosystem/>

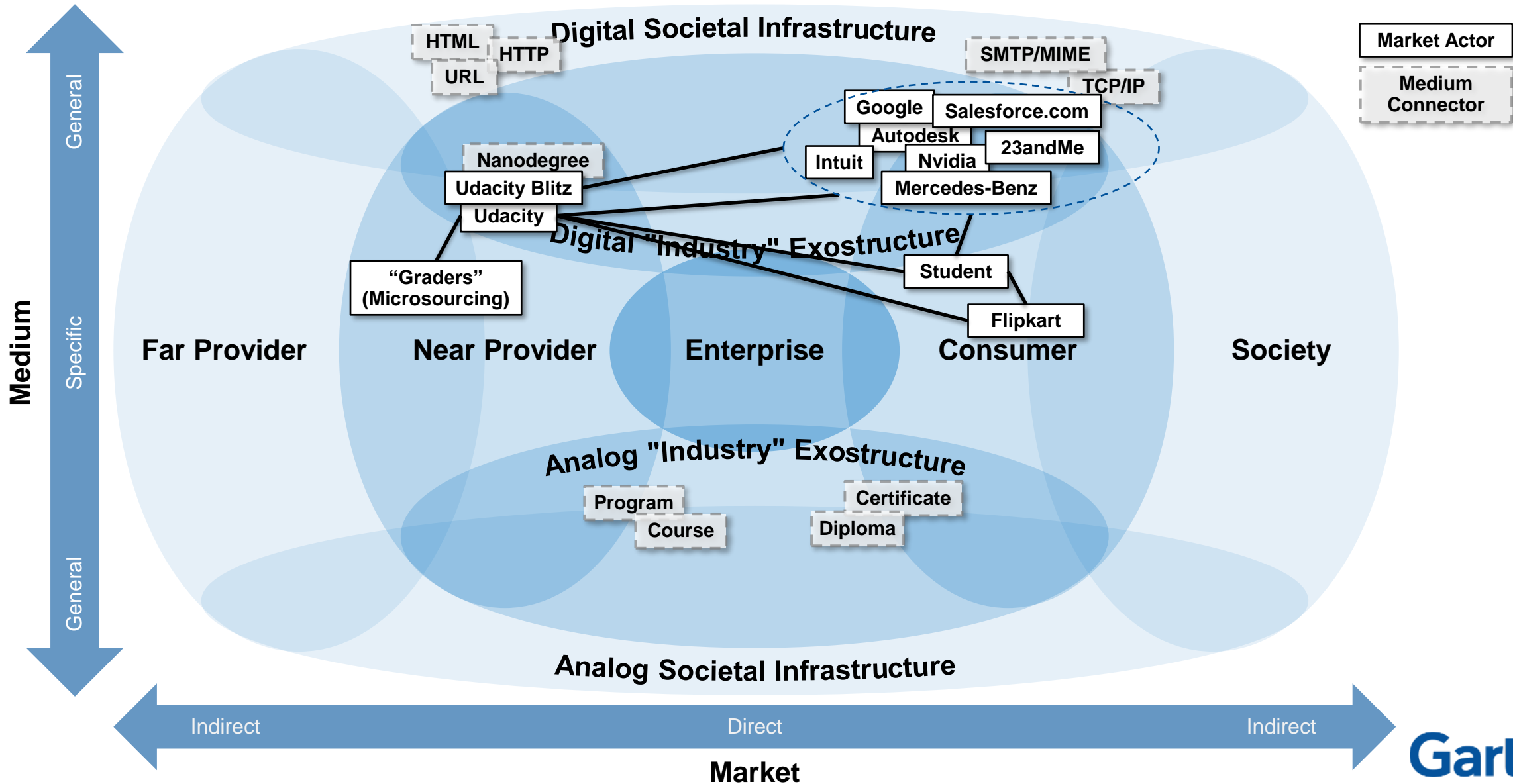
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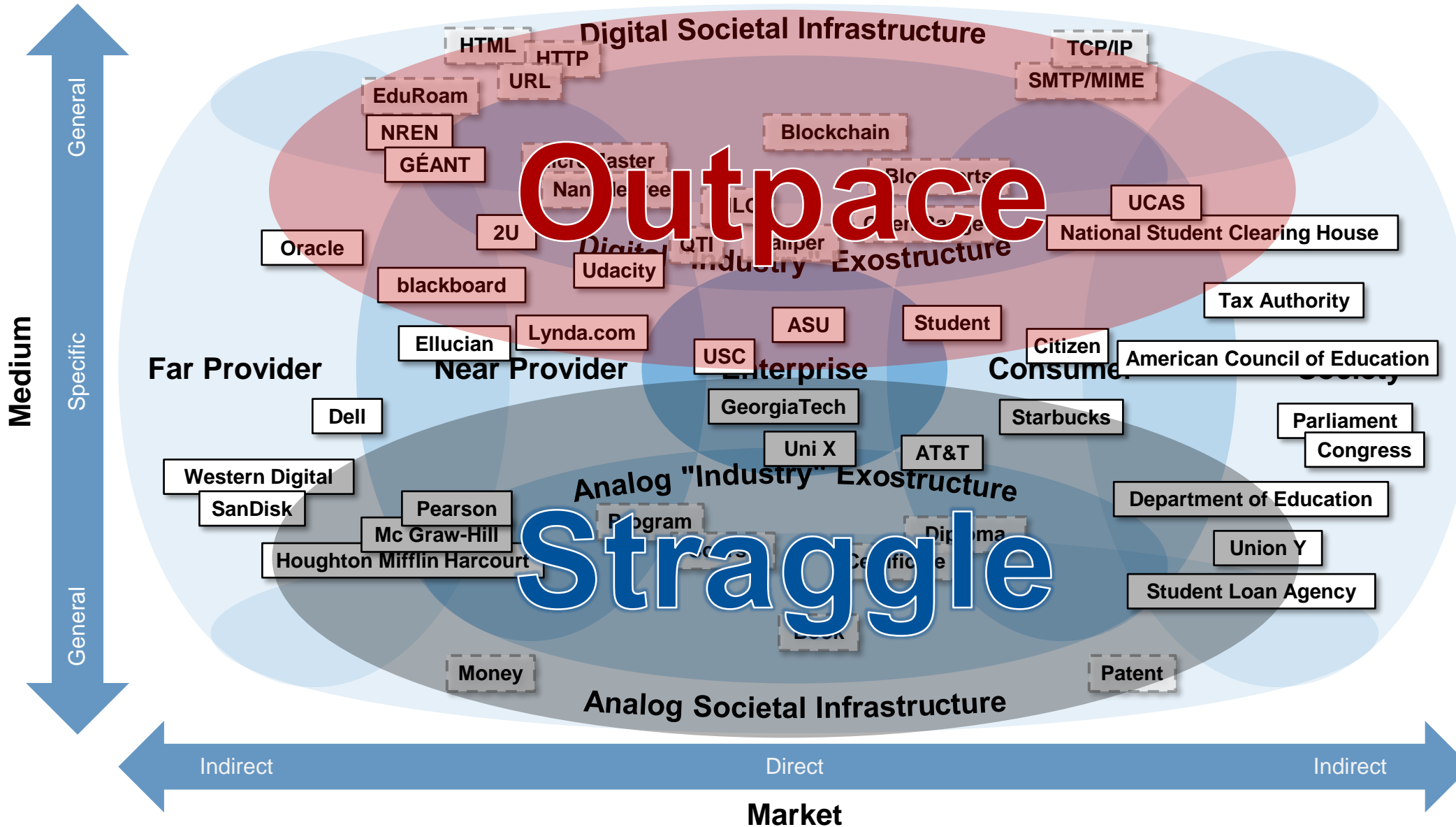
# Digital Means Speed and Personalization — "Evalgo Inc"



# Digital Means Speed and Personalization — Udacity-Flipkart



# Education Ecosystem – Find Your Niche



NON  
ZERO  
THE LOGIC OF  
HUMAN DESTINY  
ROBERT  
WRIGHT

Nonzero  
Robert Wright

Gartner®

**The End**