ATP 2019
Innovations in Testing
Orlando, FL

Challenge.
Transform.
Evolve.

INNOVATIONS IN TESTING
20 YEARS
ATP CONFERENCE 2019

Eyes on the Future

Alpine Testing Solutions, Inc.
Platinum Session

The Future Will Arrive…

0.00000018626%
doubles every day

How much of the lake will be covered on day 20? Day 30?
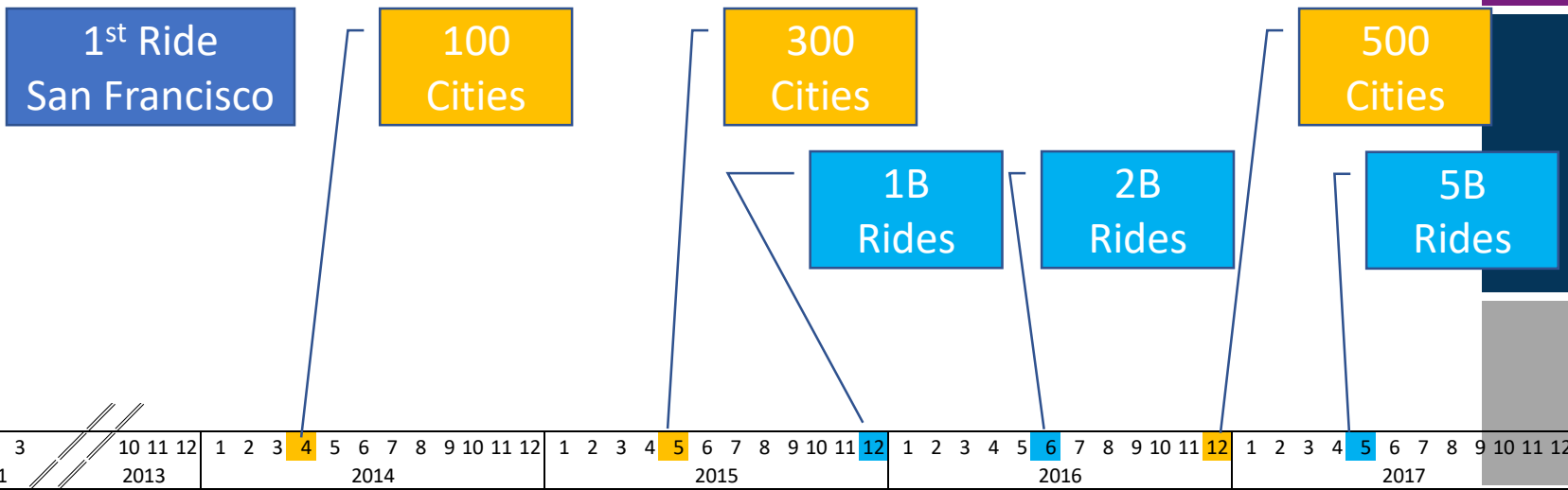
…Faster Than We Think!

20	21	22	23	24	25	26	27	28	29	30
0.10%	0.20%	0.39%	0.78%	1.56%	3.12%	6.25%	12.50%	25.00%	50.00%	100.00%

The Future Arrives...

1st Ride San Francisco	100 Cities	300 Cities		500 Cities
			1B Rides	2B Rides	5B Rides

Timeline:

7 8 9 10 11 12	1 2 3 ... 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12
2010	2011 2013	2014	2015	2016	2017
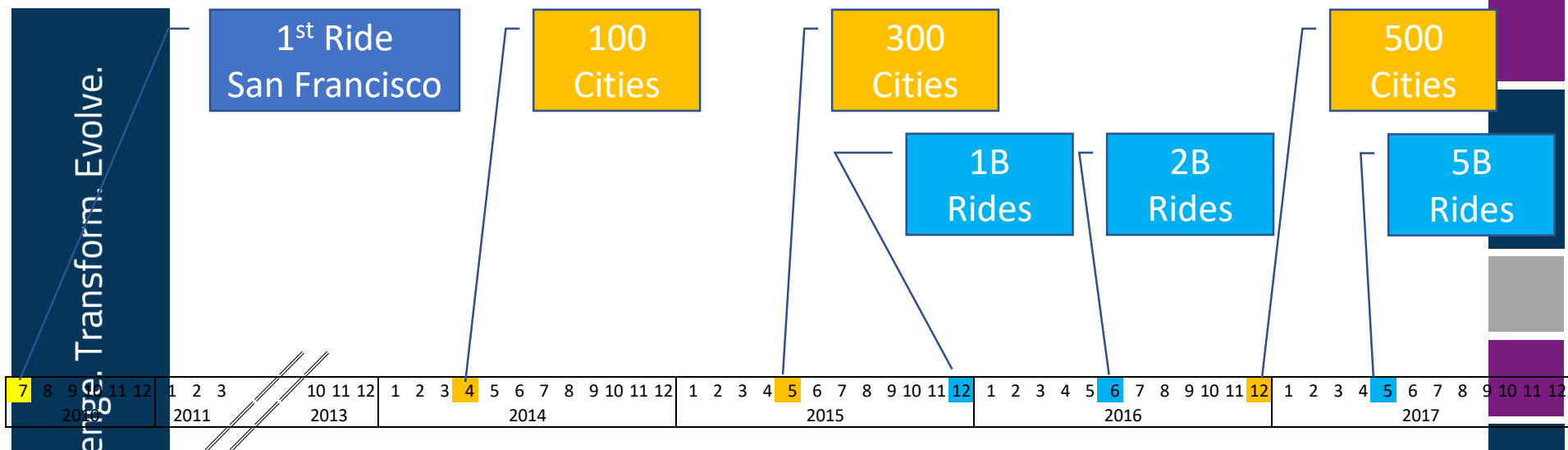
- 9+ products (including freight & food)
- 9/2016 first public autonomous ride
- 12/2017 2M miles of autonomous rides
  - 1M in previous 100 days

The Future Arrives…

- Impact
  - Taxis
  - Rental Cars
  - Public Transportation
  - Parking
  - Auto Manufacturers
  - Steering Wheel Providers

Do we know what we will be credentialing?

**Data,
Validity, and
The Future of Test Development**

Russell W. Smith, Ph.D.

VP Assessment Services

Alpine Testing Solutions

Forbes   Billionaires   Innovation   Leadership   Money   Consumer   Industry

Using Data To Create A Customer-Centric Strategy

"... if you're paying people to perform tasks that can be automated, you're losing margin...

Plus, it can free up your employees' time to perform more valuable, strategic work."
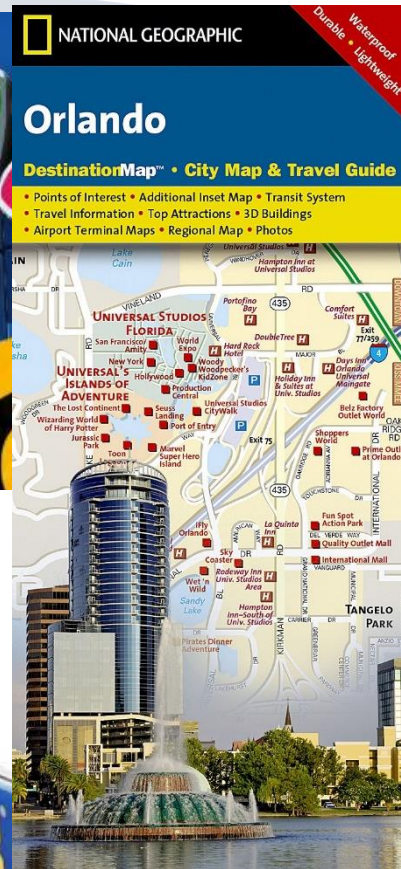
The same is true in test development!

Multiple Approaches to JTAs

- Workshops
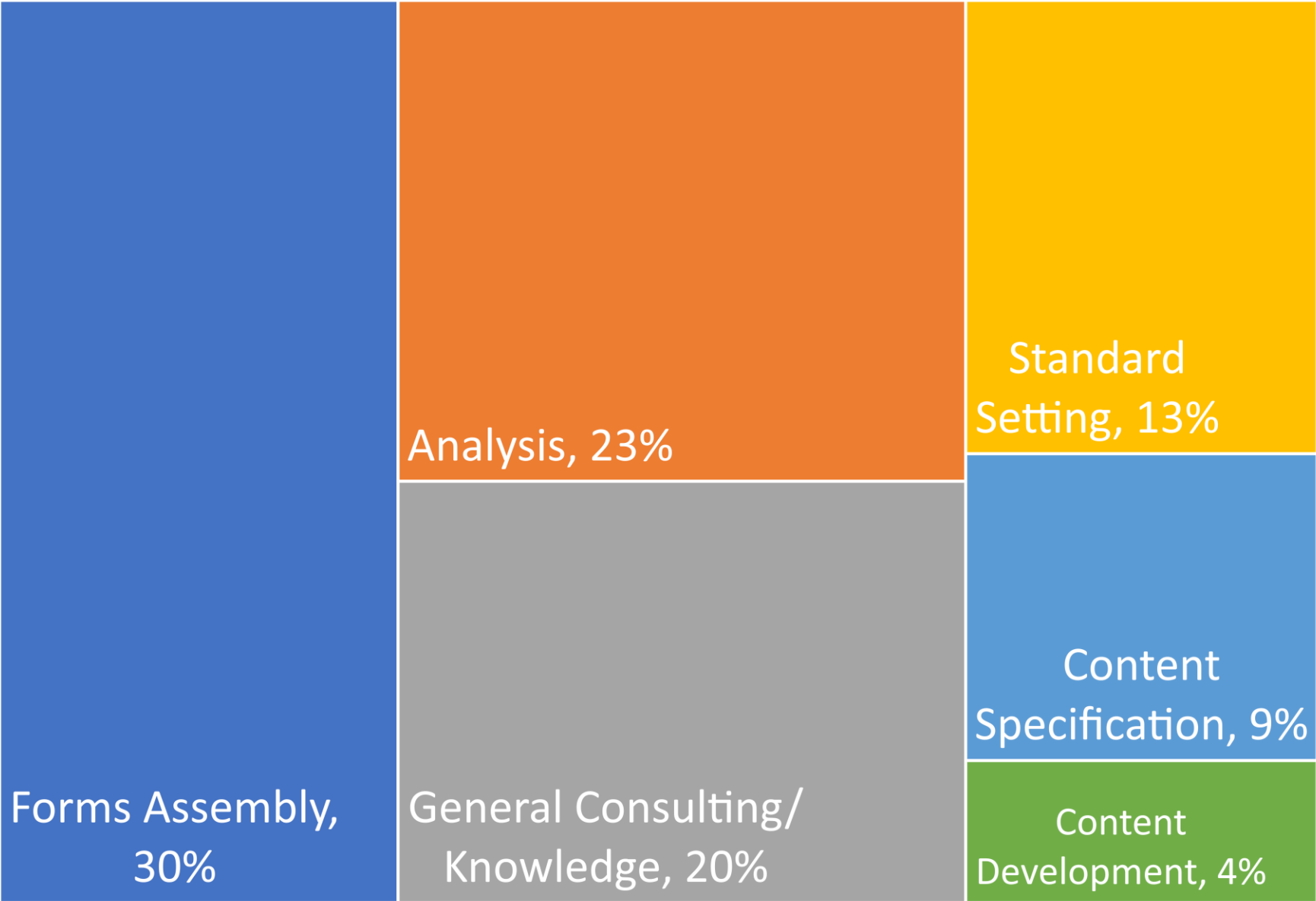- Observation/Interview
- Survey
  - Often used to verify results of the other approaches
- Time log/journal entries
  - What if we could make this easier?
    - e.g. have your computer, phone, smart watch track what you're doing

What if… data already exist?

Empirical psych time

Alpine Psych Weights
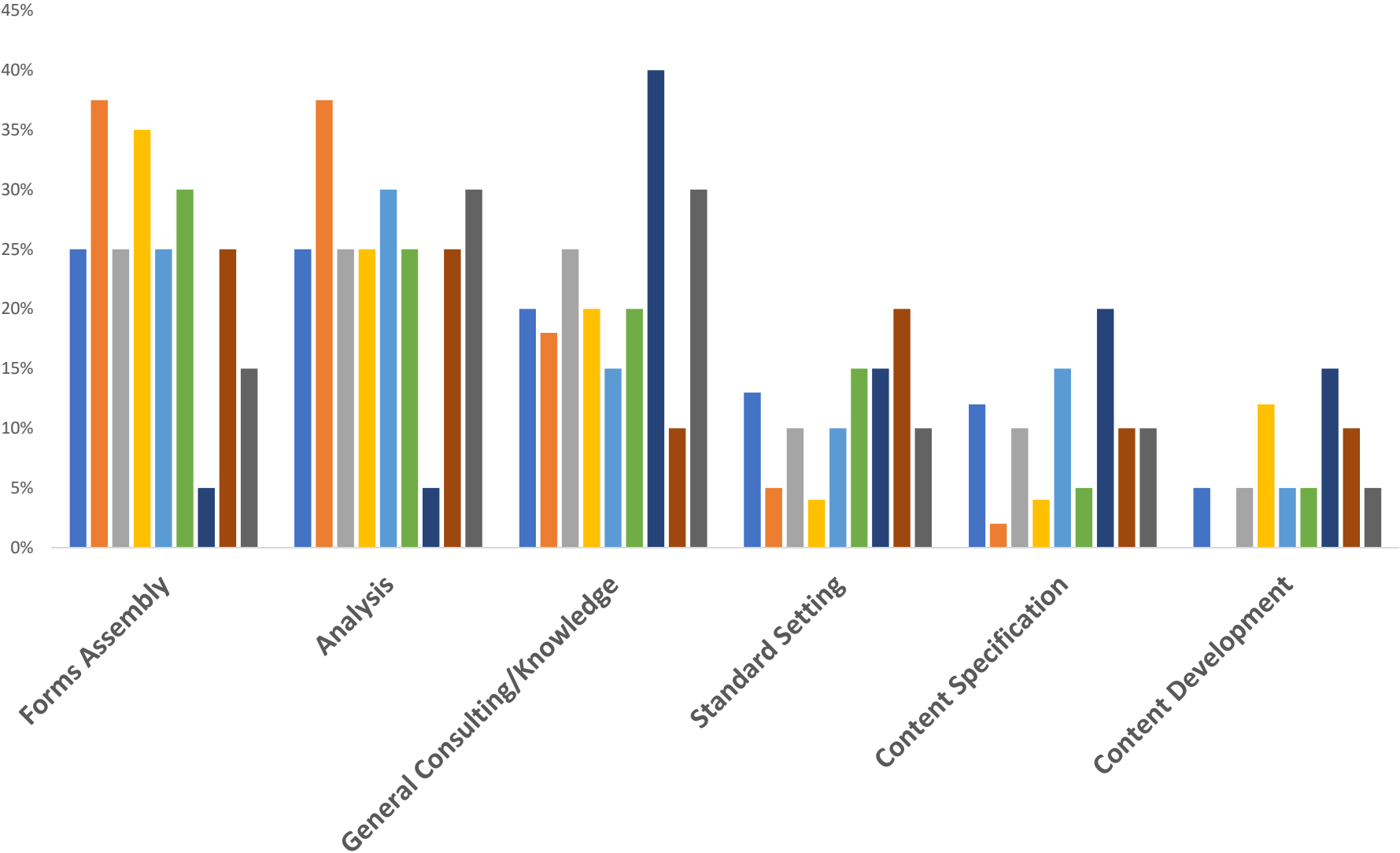
Psych Cert Content Specifications: All

Psych Cert Content Specifications: New

Challenge. Transform. Evolve.
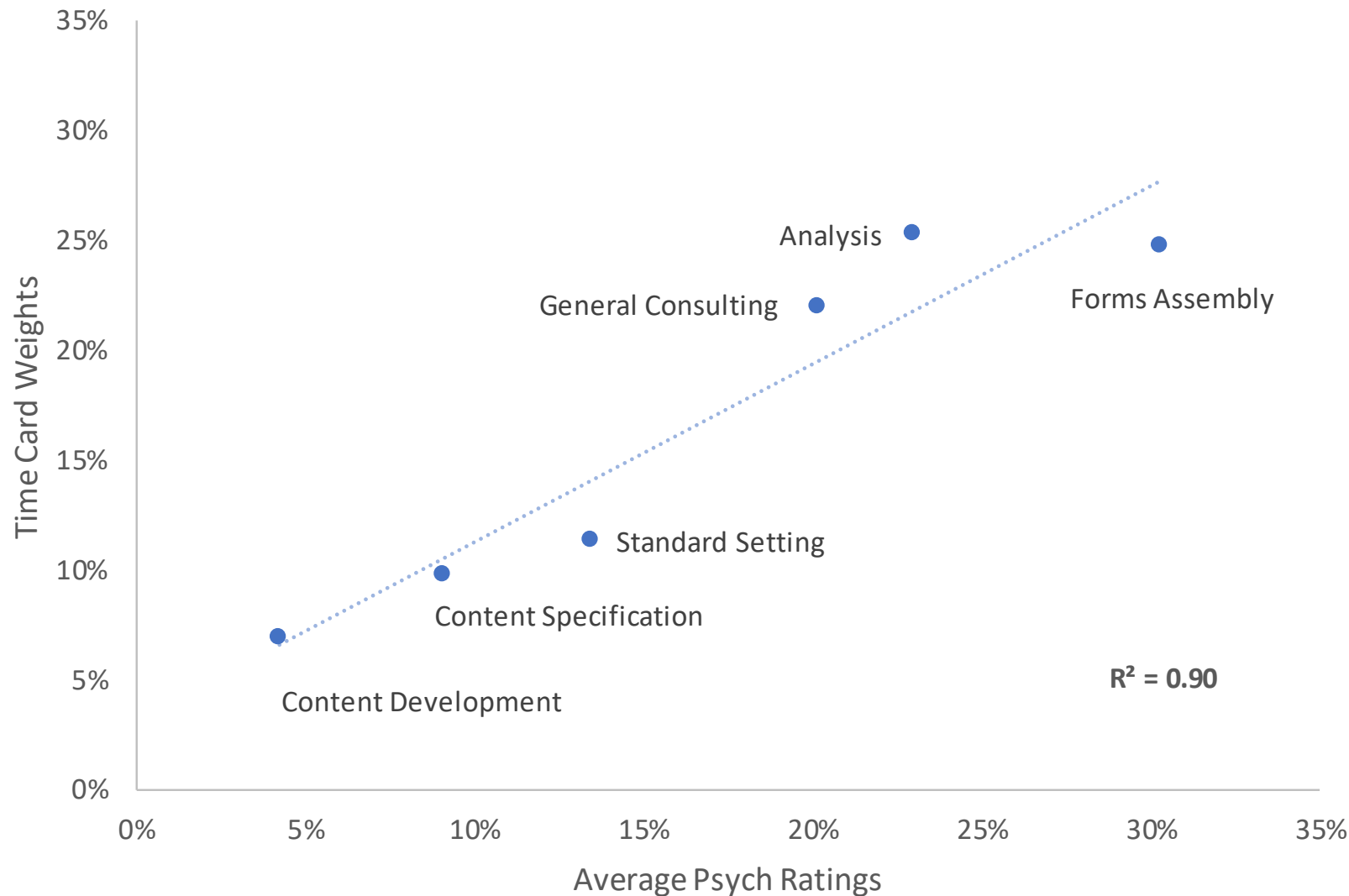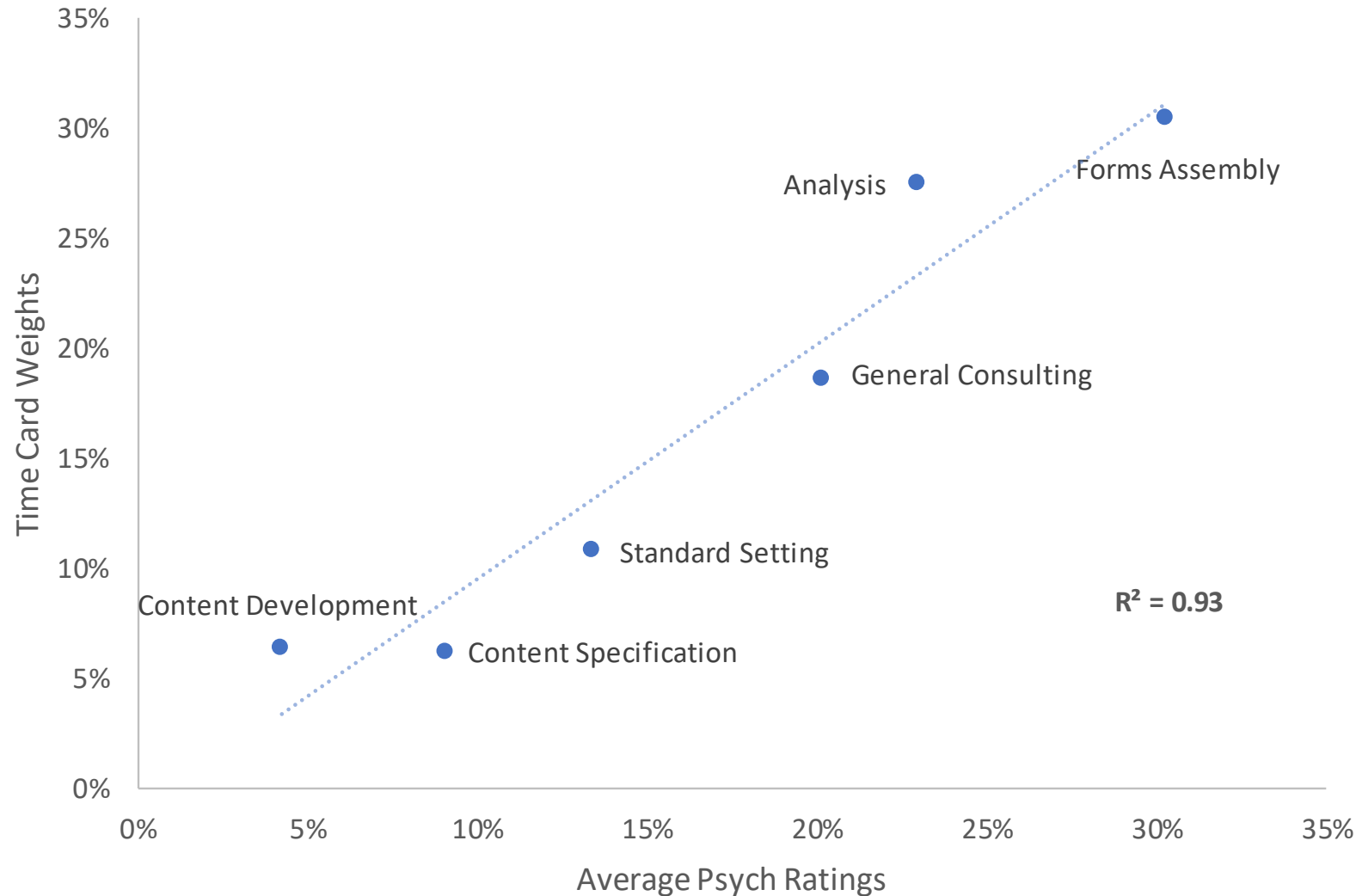
"When test content is a primary source of validity evidence... a close link between test content and the job or professional/occupational requirements should be demonstrated."

Standards for Educational and psychological testing. (AERA et al., 2014, p. 178)

"Given the elevated role of a practice analysis in credentialing, it is all the more important that it be rigorously conducted."

Handbook of Test Development (Raymond, M.R., 2016, p. 146)

Conclusions

- Empirical data can provide a stronger link (read: provide more validity evidence) than people's estimation.

- Empirical data can save SME time, which can save time to market and money.

- Psychometricians and test developers need to lead the way.

Challenge. Transform. Evolve.

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The PMI Case Study:

Credentialing Strategies for the Future

Sierra Hampton-Simmons

Global Manager, Certifications

Project Management Institute, Inc

Monolithic Examples

Stonehenge

- System of uniform stone
- Forming a system

Sphinx

- Intractable
- Indivisible

Washington Monument

- Single block of stone
- Large

PMI Background

CAPM

PMI-SP

PMP

PMI-PBA

PgMP

PfMP

PMI-RMP

PMI-ACP
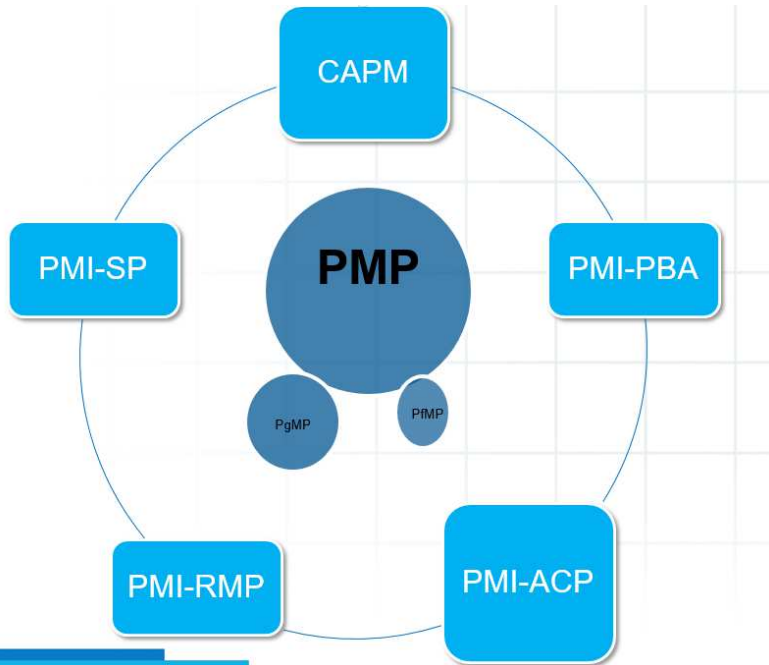
- Project Management Institute, Inc
- For-purpose company
- Advancing the project management profession
- PMI Certifications:
  - Over 1M certified
  - 8 distinct credentials
  - 14 languages
  - ANSI 17024 and ISO 9001 certified

Empowering People to Make Ideas a Reality.

Journey To Evolve the Monolith....PMI Certifications

PMP Launched

PMBOK® Guide Born

Agile Manifesto Published

PMI Founded in Atlanta

1969

1984

1996

2001

NOW
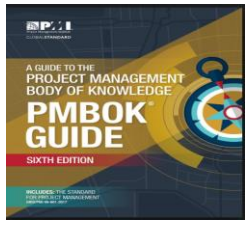
Project Management Evolving Certifications

Project Management Profession Evolving

Then: 1984
- Most projects utilized waterfall approach (predictive)
- Project teams comprised of distinct roles
- Output driven

Now: 2019 and beyond
- Project methodology mixed including agile and hybrid
- Individuals wear more than one hat (i.e. role)
- Outcome driven

Next Gen. PMI Certifications: Address Hybrid Needs

PM

BA/PMP

Agile PMP

New PMs

Agile BA

BA

AP
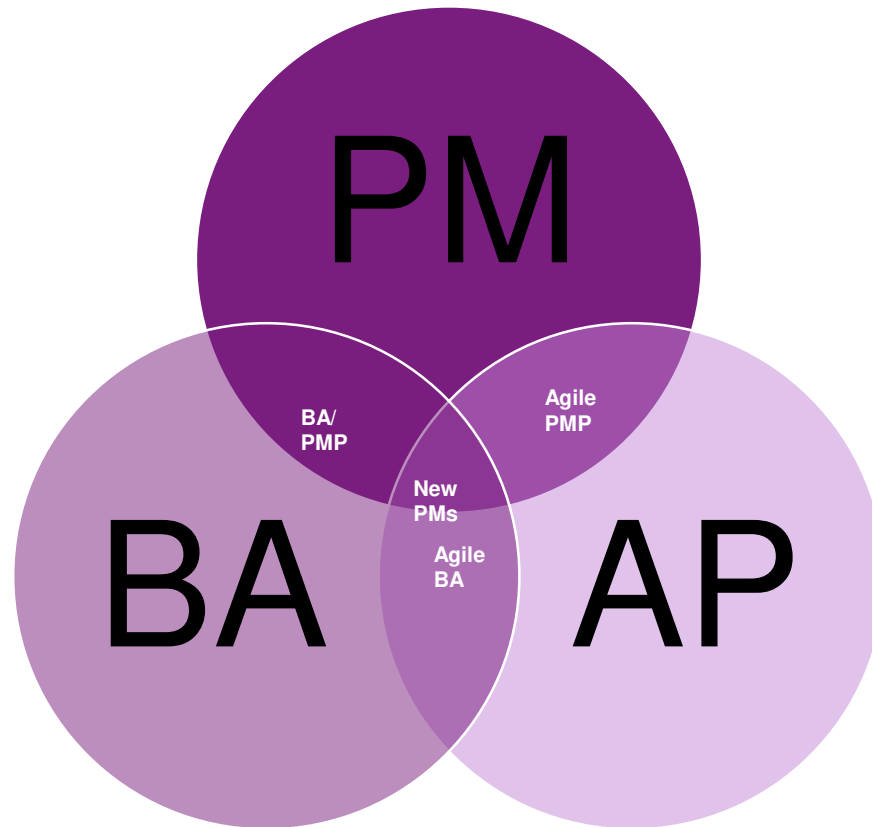
PMI Certification Development Process
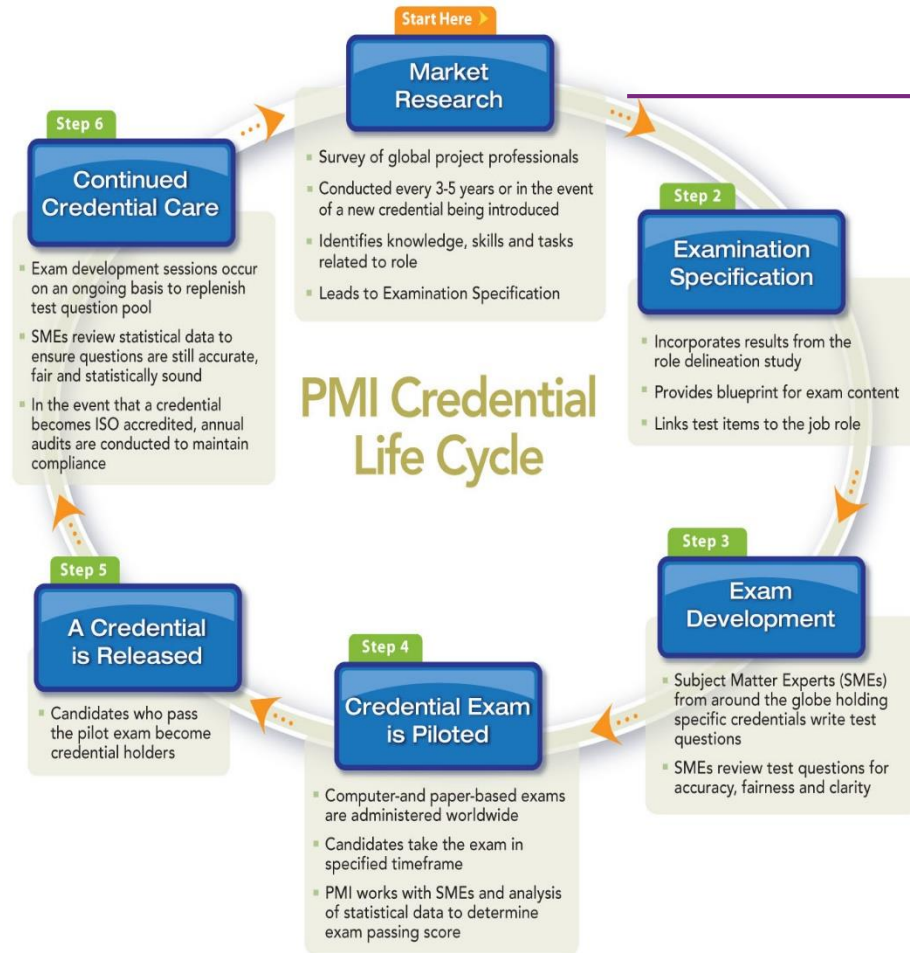
Market Research until 2017
- Role Delineation Studies
- Inside-Out Research
- Independent Qualitative
- Global Quantitative Surveys

Current Global Practice
- Addition of human centered design approaches
- Outside-In Approaches
- Recognizing various data sources (media rich)

Methodology

- Acknowledge insights from other business research and data including sales, economic reports, labor stats, etc.

- Invite "outsiders" to join in the shaping of ideas

- Adopt human-centered approaches to gain benefits including "delight" and relevance

Alpine Global Practice Analysis

- Incorporated data from a global set of resources

- Qualitative and Quantitative research
  - Incorporate data from previous research to assure alignment and allow for ways to streamline
  - Instead of single roles looking at global role sets to capture hybrid impact
  - Outcome focused with iterations adopted as needed

- Triangulation of data sets

- Market research followed by JTA

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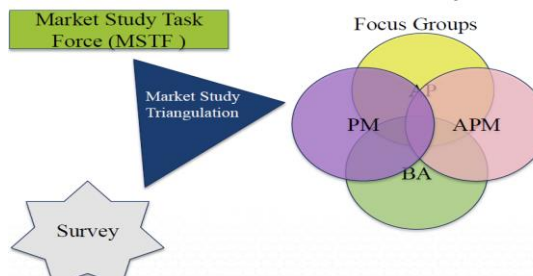
Adoption of disruptive technologies is increasing

84% — 84% of orgs agree AI provides competitive advantage

~20% — However, only ~20% of orgs have adopted AI

Reasons for adopting AI

Reason	Percentage
AI will allow us to obtain or sustain a **competitive advantage**	84%
AI will allow us to move into **new businesses**	75%
New organizations using AI will **enter our market**	75%
Incumbent competitors will use AI	69%
Pressure to **reduce costs** will require us to use AI	63%
Suppliers will offer AI-driven products and services	61%
Customers will ask for AI-driven offerings	59%

54% NO ADOPTION
23% PILOT(S)
23% ADOPTION

Has not adopted AI and has no plans to do so	Has not adopted AI but plans to do so in the future	Has one or more AI pilot projects	AI is incorporated in some processes and offerings	AI is extensively incorporated in processes and offerings
22%	32%	23%	18%	5%

Source: MIT Sloan Management Review with
BCG: Reshaping Business With AI

Employers and employees are not ready for this change

Businesses recognize that value creation lies at the intersection of humans and intelligent machines

61% of business leaders expect the share of roles requiring collaboration with AI to increase in the next three years.

54% say that human-machine collaboration is important to achieving their strategic priorities.

46% say that traditional job descriptions have become obsolete.

Workers are impatient to work with AI

67% It will be important to learn new skills to work with AI in the next 3-5 years.

45% AI will help me do my job more efficiently.

34% I am very confident in my skills to work with AI.

Their employers underestimate their willingness

ONLY **3%** of executives say they intend to increase investment in training and reskilling programs significantly in the next three years.

Source: Accenture

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Statistical factor analysis looking at 7 latent characteristics

Is Accessible
- Is interesting
- Is a good networking opportunity
- Is convenient to access
- Offers many ways to learn
- Is affordable
- Teaches traditional methods

Is Inaccessible
- Is rigorous
- Is time-consuming
- Takes too long to achieve
- Costs too much to achieve

Is Gaining Relevance
- Is modern
- Is innovative
- Wil grow in importance
- Is increasingly relevant in industry
- Teaches agile methods

Is Losing Relevance
- Is not a good investment
- Doesn't offer new knowledge
- Is out of date
- Includes irrelevant material
- Is becoming less important

Advances Career
- Is a good source of knowledge
- Helps me earn more money
- Makes me feel good about myself
- Helps me keep my skills up-to-date
- Is a worthwhile investment
- Is relevant to my industry
- Offers short-term benefits to career
- Offers long-term benefits to career
- Improves job performance
- Enhances my resume

Is a Differentiator
- Is likely to get me a promotion
- Is important to get ahead at my company
- Is important to get ahead in my field

Hold High Esteem
- Is prestigious
- Is well-known
- Is respected
- Is the industry 'gold standard'

Research Objectives

- Create a framework that pulls individuals and engages them through their career

- Identify eligibility criteria that resonates in the market with both candidates and hiring managers

- Understand the impact of "hybridization" of roles and create PMI Certification products that address this need

- Determine new digitally enhanced testing methods that are appropriate for our content

Insights Acknowledged Thus Far….

Modular learning leading to micro-credentials is key

Evolving Roles…. And certs…..

Break Monoliths….

- Defining a new framework to address the needs of the profession

- Finding ways to bring legacy credential holders along where possible

- Acknowledging all experiences, not just examinations, to evaluate individual readiness for roles

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