



Get fit for your future.  
Your Personalized Career Coach.

## The Technology behind the Power of MARI

MARi is a knowledge and skills equivalent of the planetary GPS navigation system. Our intelligent architecture supports knowing the precise location of a person within a holistic skill map, creating a skill-gap analysis to any defined academic standard, certification, occupation, or job, and then recommending the best path to the destination while tracking a person's progress all along the way.

We currently have over 50,000 standards-based skills in MARi. Any additional skill added into the cloud-based platform is immediately reference-able by every other skill in the system. Precise maps can be quickly built. Custom maps related to specific standards, jobs, and future occupations can be added. A person that has invested even a small amount of time in MARi can now be located and matched – digitally - to any destination in the system.

### Large-Scale Personal Attribute Data

- GPS with 50,000 While-Person Skill Points
- Skill Graphs Track Knowledge Roadmaps
- Defines Complex Relationships
- Translates Between Domains
- Turns Data into Information

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### Actionable Information

- Accurate Gap Analysis
- Advanced Analytics Modeling
- Personalized Recommendations
- Cross-Domain Skills Mapping
- Validated Knowledge Assessment

## Why is MARi so important to your work?

Even though there has been a major push in recent years to digitize all sorts of skill and competency information in educational settings and in the workplace, all that “digital” data is still being treated like analog documents. Many organizations have captured data about the knowledge and skills that individuals have in the form of mastery to academic standards, job descriptions, interest inventories, paper-based OJT (on-the-job) evaluations, and competency narratives, but that is as far as it goes. That data has not been turned into actionable information that can be used to influence organizational, career, and personal goal achievement beyond the specific tools used to capture the data.

All too often, data that is captured digitally is stored away in subject matter silos with rudimentary rubrics (or even no rubrics at all), or the data is layered into pyramids of occupational and job competencies using terminology and contextual limitations tailored specifically to the cultural and technical structures of each organization that originally captured the data. There is no easy way to share that data, let alone the contextual meaning of the data, between data systems, departments, organizations, or diverse industry communities of practice. All of these entities tend to use their own terminologies and view the world through different lenses that can distort the meaning of information based simply on the assumptions inherent in every organization. So, it can be extremely difficult accurately translate meanings and share information in ways that benefit organizations and individuals.

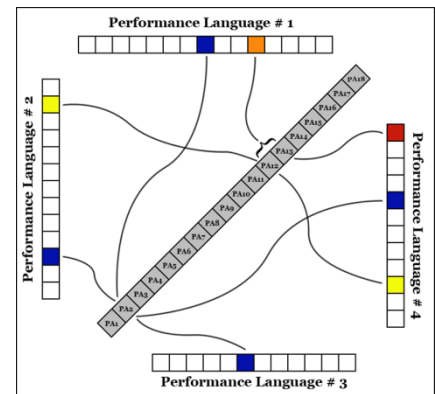
## How Does MARI Work?

MARI changes all that. We have created a means of plotting and tracking the entire set of human knowledge, skills, competencies, and personal traits (hereafter “skills”) in a manner analogous to a planetary mapping system. Our intelligent architecture supports knowing the precise location of a person on a holistic skill map, along with the locations of thousands of career and academic “destinations” of interest. Once an individual’s current location and desired destination(s) are known, MARI’s advanced analytics engine completes a full gap analysis to identify special knowledge, skills, and experiences that are either required or desirable in people who successfully reach the target destination(s). The skills gap analysis creates a recommended path along the multidimensional skill graph representing the shortest path toward mastery of the required skills. Progress toward the target destination is tracked and the recommended path is adjusted all along the way.

We currently have over 50,000 standards-based skills in MARI. They are each represented by a node in a multidimensional graph, along with numerous arcs representing directional relationships connecting neighboring nodes. Moreover, each skill node (or group of nodes) can be viewed through the lens of many different organizations or communities of practice. These special views function similar to human languages where translation is required between them. MARI calls these views “Recipes” and an easy-to-use tool in MARI facilitates the creation of a recipe with slightly different “ingredients” (granular level skills) at different “amounts” (weighting for importance). MARI can faithfully translate between the jargons of different contexts while preserving the underlying meaning.

In the conceptual diagram to the right, the diagonal collection of PAs (Personal Attributes) represents a portion of the skills that have been collected about a single user. Each of the performance languages or skill-combination “Recipe” around the edges has a slightly different view of how the PAs relate to each other. Notice the PL1 treats PA12 and PA13 as a single skill, while PL4 treats them as two separate skills. Also notice that PL2 is only interested in PA12 and completely ignores PA13, while PL3 ignores both of these PAs. This style of mapping can be used to translate any number of low-level skills between tasks, jobs, certifications, occupations, etc. and consequently between any interested groups regardless of whether they use the same terminology or not.

Analytical models use the arcs and conditional transition probabilities, along with observed levels of mastery of skill nodes, to draw conclusions about what an individual knows and what they are capable of achieving in a short period of time. That information is applied to generate the recommended paths between where the individual currently is and the desired destination. Precise maps can be quickly generated by the analytics engine, with custom maps related to specific standards, jobs, and potential future occupations.



MARI Personal Attribute and “Recipe” model Translate Contextual Meanings