

Solution Brief

IBM Watson Talent Frameworks for Energy

Industry specific job skills for organizational success



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SOLUTIONS
FOR TALENT MANAGEMENT

Safety and security. New, natural and renewable energy. Corporate compliance and communications. An aging and transforming workforce. Is your organization equipped to face these challenges head on and continue to drive the business, in addition to whatever the future may bring? Watson Talent Frameworks helps facilitate employee skill development in transitioning from traditional to new energy sources as well as cultivating and growing skills critical to accident prevention.

Our solution is designed to help you quickly onboard new field operations staff, shrinking time to productivity and proficiency through a detailed set of skills and abilities specific to individual roles. Retain your best nuclear engineers by providing clear visibility to future career opportunities, and engage safety engineers with skill-specific content to drive their day-to-day performance and on-going development.

Connect People to Business

Watson Talent Frameworks for Energy ensures a benchmark model to centralize and provide consistency in how you define jobs and skills across all aspects of talent management. It provides HR both data and content to

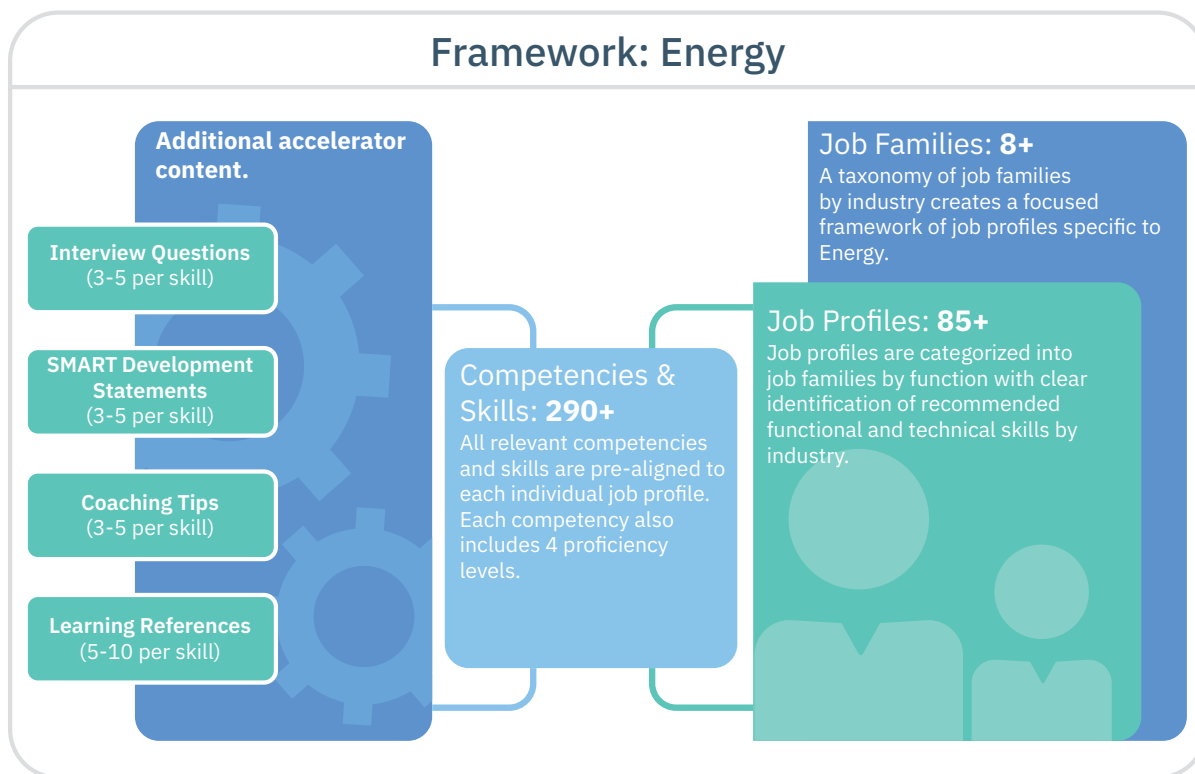
match the right talent with company requirements, creating an engaging employee experience to drive better business results.

Watson Talent Frameworks includes several key elements:

- Pre-defined job profiles detail the skills and levels of proficiency employees need to excel.
- Standard job descriptions attract qualified candidates by clearly defining key responsibilities.
- Interview questions provide a guide for accurately assessing candidates.
- Job-specific skills, behaviours and coaching tips support managers in facilitating clear, objective performance reviews.
- SMART development statements give employees specialized, actionable practices to help them improve and achieve more.
- Learning References provide a path for growth and development.
- The jobs taxonomy drives engagement with clear and transparent career opportunities.

Watson Talent Frameworks powers people analytics and cognitive HR with a data rich foundation.

Fig 1: IBM Watson Talent Frameworks architecture



Deep Dive: Job Profile

Let us peruse a job profile from Watson Talent Frameworks for Energy to better understand the data and content available. Consider the job profile of a ‘Safety Engineer (Refining)’ highlighted below as a sample.

Table 1. Job profile classification with descriptions.

Job Family Code	REF
Job Family Name	REFINING and PROCESSING
Job Family Description	Oil refining, petrochemicals, and gas processing.
Job Profile Code	REF-4SAF
Job Profile	Safety Engineer (Refining)
Job Role Description	Implements and monitor policies and programs to minimize injuries and property loss; ensures regulatory compliance.
Job Band ID	4
Job Responsibility	<ul style="list-style-type: none"> (1) Communicates with employees to explain safety procedures and operations. Ensures proper employee training and site-specific information. (2) Conducts safety audits, regulatory inspections and facility assessments to identify real and potential hazards in the workplace. Produces and disseminates safety reports. (3) Establishes and implements the company’s hazard abatement and occupational health and safety programs. Develops and implements safety procedures and programs. (4) Prepares and submits required permits and compliance reports. Investigates and reports on accidents; makes recommendations on safety improvements.

* Each job profile is assigned a unique job code ID, mapped to a job family, and tagged to an appropriate job band.

* Apart from descriptions of the main job family and the job role, each job profile includes four key job responsibilities.

Table 1.1. Job band categories and descriptions for each.

Job Band ID	Job Band Name	Job Band Description
1	Executive Management	Vision, policy, strategy and direction setting; Enterprise and industry view; Driving organizational goals
2	Senior Management	Strategy formulation; Vision implementation; Operational responsibility; Cost and risk management; Enterprise view
3	Management; Senior Level Consulting	Functional, technical or process leadership; Management of multiple teams; High complexity and ambiguity; Tactical responsibilities
4	First Line Management; Senior Professional	Team or technical supervision; Expertise and experience with complex technical activities; Project management and consulting
5	Team Leadership; Technical Professional	Difficult technical tasks; Implementation experience; Self-sufficiency; Small project responsibility; Technical supervision
6	Administrator; Technician, Trainee	Routine technical or administrative tasks; Follows procedures; Operates under supervision

* Each job profile is mapped to one of six pre-defined job bands.



Deep Dive: Competencies & Skills - Overview

Let us explore recommended competencies and skills data for the sample job profile highlighted in Table 1.

Table 2. List of competencies recommended for Safety Engineer (Refining): REF-4SAF.

Competency Code	Competency Name	Proficiency Level	Priority
B0480	Crisis Management	2 - Working Experience	3 - High
B1060	Effectiveness Measurement	2 - Working Experience	2 - Medium
I0250	Conflict Management	2 - Working Experience	1 - Low
I0300	Consulting	3 - Extensive Experience	3 - High
I0350	Problem Solving	2 - Working Experience	1 - Low
I0480	Effective Communications	2 - Working Experience	3 - High
I0700	Decision Making and Critical Thinking	2 - Working Experience	3 - High
I0950	Teamwork	3 - Extensive Experience	2 - Medium
I1000	Managing Multiple Priorities	2 - Working Experience	1 - Low
L0000	Organizational Leadership	2 - Working Experience	2 - Medium
M0500	Vendor/Supplier Management	2 - Working Experience	2 - Medium
M1010	Producing Results	3 - Extensive Experience	3 - High
TEN0100	Oil and Gas Industry	2 - Working Experience	2 - Medium
TEN0110	Regulatory Environment (Oil and Gas)	3 - Extensive Experience	2 - Medium
TEN0120	Best Practices and Standards	3 - Extensive Experience	3 - High
TEN0130	ISO 14001 (Environment in Oil and Gas)	3 - Extensive Experience	3 - High
TEN0140	ISO 9001 (Quality Management in Oil and Gas Production)	2 - Working Experience	3 - High
TEN0150	Materials Handling and Management (Oil and Gas)	3 - Extensive Experience	3 - High
TEN0160	Emergency Preparedness and Response	3 - Extensive Experience	3 - High
TEN0170	Safety (Oil and Gas)	3 - Extensive Experience	3 - High
TEN0180	Project Management (Oil and Gas)	2 - Working Experience	2 - Medium
TEN0350	Pipeline Operations	2 - Working Experience	2 - Medium
TEN0400	Refinery Operations	2 - Working Experience	2 - Medium
TEN0420	Refinery Production Control	2 - Working Experience	2 - Medium
TEN0475	Refinery Testing	2 - Working Experience	3 - High
TEN0550	Transportation (Oil and Gas)	2 - Working Experience	2 - Medium
TEN0600	Engineering Services	2 - Working Experience	2 - Medium
TEN0640	Chemical Engineering (Oil and Gas)	2 - Working Experience	3 - High
TEN9000	Oil and Gas Products	2 - Working Experience	3 - High
TEN9100	Fuels	1 - Basic Understanding	2 - Medium
TEN9200	Lubricants	1 - Basic Understanding	2 - Medium
TEN9300	Petrochemicals	1 - Basic Understanding	2 - Medium

* REF-4SAF Safety Engineer (Refining) has 12 more competencies not shown herein.



Deep Dive: Competencies & Skills - Detail

Let us explore all the data and content available for the sample competency highlighted in Table 2.

Table 3. Competency and skill details of Safety (Oil and Gas): TEN0170.

Competency Code: TEN0170 Competency Name: Safety (Oil and Gas)	
Competency Description	Knowledge of work-related hazards and procedures, practices, considerations and regulatory requirements for the protection of workers, community, environment and company assets.
Proficiency Levels	Level 1: Basic understanding
	Level 2: Working experience
	Level 3: Extensive experience
	Level 4: Subject matter depth/breadth
Proficiency Level Behaviors	(1) Assesses and reports unusual or new safety hazards or violations; initiates corrective action. (2) Determines appropriate action to take when unsafe conditions are encountered. (3) Discusses managers' and workers' responsibilities in ensuring compliance with OSHA requirements. (4) Ensures that all personnel and contractors comply with relevant safety policies and regulations. (5) Performs safety inspections to assure compliance with company, local and federal regulations. (6) Promotes workplace safety among supervisors and workers; communicates safety rules and regulations.

* Each competency is defined by four levels of proficiency – Level 1: Basic understanding, Level 2: Working experience, Level 3: Extensive experience, Level 4: Subject matter depth/breadth

Table 3.1. Accelerator content for each competency includes – Interview questions & SMART Development statements.

Competency Code: TEN0170 Competency Name: Safety (Oil and Gas)	
Interview Questions	(1) What experience do you have with performing safety inspections in the manufacturing environment? (2) What safety issues did you run into with hazardous materials and substances? (3) What contributions did you make to your organization's safety procedures? (4) How did you develop a safety plan for reducing hazards and avoiding accidents? (5) What mechanism did your organization have in place to report safety violations in the manufacturing environment?
Development Statement	(1) Advise on safety assurance activities for 3 construction projects in one month. (2) Arrange 4 publicity events regarding occupational safety protection and OSHS compliance for members of the organization within 2 months. (3) Conduct at least 2 health and safety investigations during oil production/maintenance processes in the next 6 months. (4) Reduce the amount of operational safety problems that occur in a facility by 10% within the next 3 months.

*Accelerator content helps managers and employees engage with competency and skill data in an on-going manner.



Table 3.2. Accelerator content for each competency also includes – Coaching tips & Learning references.

Competency Code: TEN0170		Competency Name: Safety (Oil and Gas)				
Coaching Tip Descriptions		(1) Periodically conduct employee testing/training programs designed to assess employees’ knowledge of emergency plans and increase understanding. (2) Create warning mechanisms detailing common safety issues; use these mechanisms to decrease response time to these issues. (3) Establish and document a clear process for conducting safety assessments. Ensure that those responsible for assessments have access to the documentation. (4) Report potential safety issues as soon as you can to a manager and try to provide recommendations for avoiding the issue in the future.				
Learning References						
Learning Reference Type	Books	Books	Books	Organizations, Associations	Organizations, Associations	External Publications
Learning Reference Name	Corporate Safety Compliance: OSHA, Ethics, and the Law	Safety, Reliability and Risks Associated with Water, Oil and Gas Pipelines	Quantitative Environmental Risk Analysis for Human Health	America's Natural Gas Alliance	Hazardous Materials Advisory Council (HMAC)	Pollution Prevention and Control Procedure Case Study
Learning References Description	A guideline for the safety and health of professionals and for the resolution of legal and ethical issues as a result of changing responsibilities and new laws.	Introduces three major defect assessment tools used in pipeline repair.	Provides the basic concepts and applications of chemical and radioactive analysis. Shows an overview of environmental risk analysis.	Representing largest independent natural gas exploration and production companies, the organization promotes the economic, environmental and national security benefits of greater use of domestic natural gas.	Promotes improvement in the safe transportation of hazardous materials/ dangerous goods globally by providing education, assistance and information to the private and public sectors.	Subtitle: An application for petroleum refineries. Discusses pollution prevention and issues related to control procedures in the petroleum refinery process.
Author	Schneid, Thomas	Pluinage and Elwany	Fjeld, Robert A. et al			Rodriguez and Martinez
Publisher	CRC Press	Springer	Wiley-Interscience			Thomson Gale
Publication Year	2008	2007	2007			2005
Provider	Amazon	Amazon	Amazon			Amazon
URL					http://www.hmac-inc.org/	http://www.amazon.com/Pollution-prevention-control-procedure-study/dp/B000BHS4GO/ref=sr_1_4?ie=UTF8&s=books&qid=1251966300&sr=8-4
ISBN_ASIN	ISBN-13: 978-1420066470	ISBN-13: 978-1402065255	ISBN-13: 978-0471722434	www.anga.us		



Keeping it Current

Watson Talent Frameworks is developed by a dedicated team using an independent research methodology and augmented by Watson. IBM applies machine learning to analyze and synthesize daily feeds of job board data. Watson identifies new or updated content which is then further refined by the IBM content curation team.

As part of the process, every framework goes through a comprehensive review to identify changes relevant to industry trends. These changes are validated to ensure that the job architecture is up to date with current skill demands in the industry.

Sources include:

- Career and recruiting websites
- Client surveys and content workshops
- Disruptive industry changes
- New disciplines, job functions, job roles, or skills in technology or new industries
- Organizational development and HR best practices
- Regulatory legislation and industry compliance requirements
- Research organizations and professional associations
- Vision and thought leading vertical experts

For additional information

To learn more about IBM talent management solutions, Visit: www.afmtalentmanagement.co.uk/
Or contact: Granville Smithies at gsmithies@afmgroupsolutions.co.uk. Or call 01438 237224



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