

Alaska Career Ladder Branches Out

Upgrade to lattice expands online job-seeking tool

In 2009, the Alaska Department of Labor and Workforce Development's Research and Analysis Section unveiled a new online tool called the Alaska Career Ladder, which has helped job service professionals and job seekers identify the best opportunities for advancement to a goal occupation or from a current position.

Recently, R&A expanded the career ladder into a career "lattice." While the ladder helped students and workers identify upward career paths, the lattice adds lateral opportunities to change occupations without spending years attaining additional education and training. This can help those who have lost a job find additional opportunities for reemployment as well as those who want to make a career change but don't want to completely start over.

A career lattice can also help educators and school counselors show students how to focus their interests and skills to pursue a rewarding career. Career counselors and job placement specialists can assess the experience and credentials their clients already have, identify advancement opportunities or changes to a related occupation at about the same level, and develop an achievement plan. Individuals can also explore these career options on their own.

Business owners and hiring managers who are having trouble filling certain positions may need to broaden their recruitment pool, and career lattices can help them identify additional occupations with transferable skills and experience they may have otherwise overlooked. Businesses can also develop company-specific career lattices to identify paths for worker promotion.

How the lattice is displayed

The Alaska Career Lattice is designed for ease of use, but a short tutorial can help you get started. When you visit the site for the first time (live. laborstats.alaska.gov/cl/cloccs.cfm), click the

"How to Use the Career Lattice" link in the right-hand menu (see Exhibit 1) for a tutorial with illustrated examples.

Each occupation on the lattice has its own page. To get started, select an occupation from the list on the main page to display its lattice — for this example, select "budget analyst." Budget analyst now appears in the large box at the center of the lattice and is called the "focus occupation." (See Exhibit 1 for a screen shot.) The other occupations on the page are "associated occupations," which our research showed as most related to budget analysts. A user can click on the title of any occupation on the page to go to that occupation's career lattice.

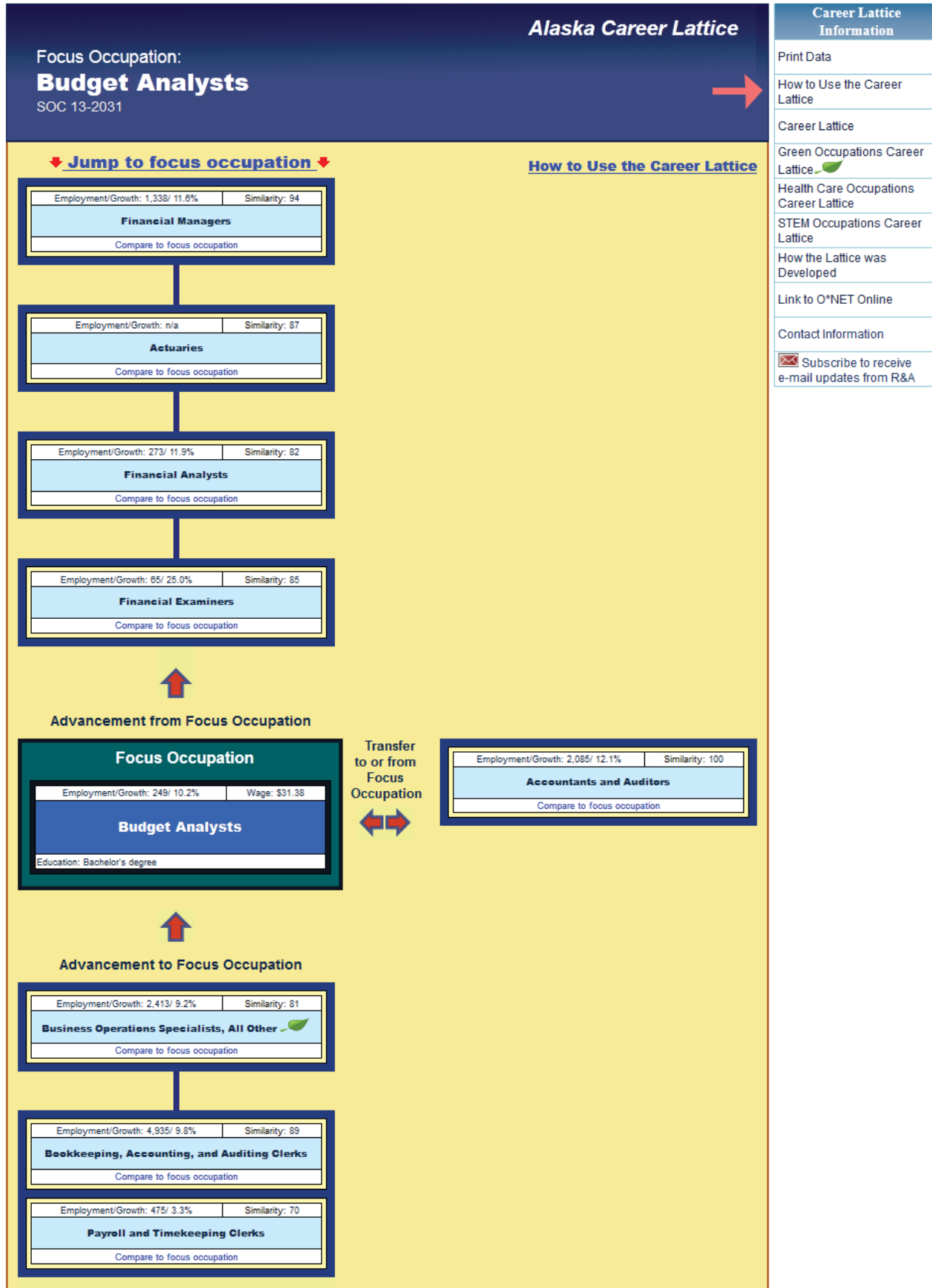
Occupations that provide advancement opportunities are on the rungs above the focus occupation (in this example, financial examiners, financial analysts, actuaries, and financial managers). Occupations that are stepping stones to the focus occupation are on the rungs below it (in this example, payroll and timekeeping clerks; bookkeeping, accounting, and auditing clerks; and business operations specialists, all other). Occupations that may provide a parallel change without additional education or training are to the right of the focus occupation (in this example, accountants and auditors).

All of the occupations on the page are placed in the order of their relative levels, starting with the lowest-level occupation on the bottom rung, progressing to the highest-level occupation at the top. Relative level was determined by analysis of wage estimates, comparisons of analyst ratings for a range of job characteristics, and the results of our nine-year study of worker transitions. A worker will typically need additional education, training, and/or experience to reach an occupation on a higher rung.

Though all the occupations shown in Exhibit 1 are directly linked to budget analysts, not all

Focus on Budget Analysts 1

Related occupations and paths for advancement



are directly linked to each other. For example, a worker could — with additional education, training, and/or experience — move from a position as a bookkeeper to a budget analyst without first becoming a business operations specialist. Likewise, a budget analyst wouldn't necessarily need to become a financial examiner to become an actuary.

Estimated Alaska employment and growth are at the top left of each box. In the focus occupation's box, the most recent wage estimate is shown at the top right and the typical required education/training level is at the bottom.

Comparing occupations

There is a similarity score at the top right of each associated occupation's box, with a highest possible score of 100. Only jobs with a similarity score of 70 or higher will appear on the page, and scores in the high 80s or above mean the jobs are strongly related.

The "compare to focus occupation" link at the bottom of each associated occupation's box will open a separate comparison page for job charac-

teristics and requirements. Three tables compare the associated occupation's ratings in knowledge, skills, and abilities with the focus occupation's ratings. For example, Exhibit 2 shows knowledge elements for budget analysts (the focus occupation) and financial examiners (the associated occupation).

The most important knowledge elements for financial examiners are in the first column, the average rating for all occupations is in the second column, the ratings for financial examiners are in the third column, and the ratings for budget analysts are in the fourth column. The column on the far right shows how budget analysts compare to financial examiners.

Note that both occupations' ratings for these knowledge elements are much higher than the average for all occupations. This means the occupations are clearly related and explains the high similarity score for knowledge that appears at the top of the table.

Budget analysts have scores that are about the same as or stronger than financial examiners in all elements except English language and law and

2 Budget Analysts and Financial Examiners

Comparison of required knowledge

Comparisons of Job Characteristics

Focus Occupation: Budget Analysts (13-2031)

Associated Occupation: Financial Examiners (13-2061)

Compare Knowledge

Compare Skills

Compare Abilities

Compare Detailed Work Activities

Compare Tools and Technologies

<

<<

0

>

>>

Focus occupation element is lower

Focus occupation element is much lower

Focus occupation element is at a similar level

Focus occupation element is at a higher level

Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 95

Focus Occupation: Budget Analysts (13-2031)

Associated Occupation: Financial Examiners (13-2061)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
English Language	11.2	16.1	14.4	< Expanded education and/or training may be required
Economics and Accounting	4.4	15.5	19.2	>> Current knowledge level is likely more than sufficient
Law and Government	5.9	14.3	9.6	<< Extensive education and/or training may be required
Mathematics	9.2	14.1	15.9	> Current knowledge level is likely sufficient
Clerical	7.3	13.2	12.9	0 Current knowledge level may be sufficient
Administration and Management	8.4	11.8	14.7	> Current knowledge level is likely sufficient

Career Lattice Information

Print Data

How to Use the Career Lattice

Career Lattice

Green Occupations Career Lattice

Health Care Occupations Career Lattice

STEM Occupations Career Lattice

How the Lattice was Developed

Link to O*NET Online

Contact Information

Subscribe to receive e-mail updates from R&A

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

government. The evaluation column shows that a budget analyst who wants to become a financial examiner would probably need extensive additional education or training in law and government, such as state regulations and statutes.

The comparison page also includes tables that show which detailed work activities, tools, and technologies the two occupations have in common.

An example of using the lattice

Let's say you're interested in becoming a budget analyst, and you're looking at its lattice as shown in Exhibit 1. The occupations below the budget analyst focus box are the jobs that may lead you toward that goal.

If you're a young person looking for an entry-level job, you might consider becoming an accounting clerk first. If you click "compare to focus occupation," you'll discover you need additional education, training, and experience to qualify as a budget analyst. But if you get an accounting degree, work experience as an accounting clerk may give you a leg up on another graduate without that experience.

Let's say you earn an accounting degree, spend some time working as an accounting clerk, then land a job as a budget analyst — now you want to know your options for further advancement.

After reviewing the occupations above the budget analyst box, you consider becoming a financial analyst. If you click "compare to focus occupation" at the bottom of the financial analyst box, you can assess any deficiencies in your knowledge, skills, or abilities. (See Exhibit 3.)

It appears that much of your current knowledge, skills, and abilities might be sufficient to make the jump to a job as a financial analyst, but you may need to do more writing at a higher level. (See English language in the knowledge table, writing in the skills table, and written expression in the abilities table.) You may also need to learn more about statutes and regulations (see law and government in the knowledge table), and have a high-level ability to use more than just mathematical reasoning to make decisions (see deductive reasoning on the abilities table).

But let's say your company hits hard times, and you lose your job as a budget analyst. You are unable to find another position, and you need to find a new job right away. Occupations to the right of the budget analyst box may be the best opportunities for immediate placement. In this case, you might consider becoming an accountant or auditor. If you click "compare to focus occupation," you will find your knowledge, skills, and abilities may already qualify you for many accountant and auditor jobs.

You may also consider occupations above or below the budget analysts box. Depending on the duties of your current job, your education level, and your years of experience, you might already qualify for a job on a higher rung. Financial analyst might be a consideration if you have strong writing skills and a solid understanding of relevant statutes and regulations. Occupations on a lower rung may also be worth considering if you can't find anything at your current level.

Green jobs and health care

The career lattice has the ability to filter by certain types of occupations, such as by green jobs and health care occupations. On every page there is a "Career Lattice Information" menu box at the top right with a number of these links.

A green leaf denotes green jobs. For example, in Exhibit 1, "all other business operations specialists" has a leaf next to its title, showing it has a significant number of workers involved in green activities.

How the lattice was developed

Most career lattices are limited in scope and rely almost entirely on informed analyst judgment, anecdotal knowledge, and assumptions about the similarity of occupations based on generalizations of job characteristics.

Many occupation-to-occupation associations are obvious, but many are not. For example, dental hygienists and dental assistants are obviously related, but which of the myriad business and finance occupations would offer the best opportunities for a loan officer?

Alaska's employers report their workers' occupa-

3 Budget Analysts and Financial Analysts

Comparison of knowledge, skills, and abilities

Comparisons of Job Characteristics

Focus Occupation: Budget Analysts (13-2031)

Associated Occupation: Financial Analysts (13-2051)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<	Focus occupation element is lower
<<	Focus occupation element is much lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge				
Similarity of Focus Occupation to Associated Occupation: 96				
Focus Occupation: Budget Analysts (13-2031)				
Associated Occupation: Financial Analysts (13-2051)				
Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Economics and Accounting	4.4	19.8	19.2	0 Current knowledge level may be sufficient
English Language	11.2	17.1	14.4	< Expanded education and/or training may be required
Mathematics	9.2	16.7	15.9	0 Current knowledge level may be sufficient
Administration and Management	8.4	12.1	14.7	> Current knowledge level is likely sufficient
Law and Government	5.9	11.5	9.6	< Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills				
Similarity of Focus Occupation to Associated Occupation: 94				
Focus Occupation: Budget Analysts (13-2031)				
Associated Occupation: Financial Analysts (13-2051)				
Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Writing	9.2	13.2	10.5	< A higher skill level may be required
Judgment and Decision Making	9.4	11.6	11.5	0 Current skill level may be sufficient
Active Learning	8.7	11.2	10.1	< A higher skill level may be required
Mathematics	6.2	10.8	10.6	0 Current skill level may be sufficient
Systems Analysis	6.5	9.9	9.7	0 Current skill level may be sufficient
Systems Evaluation	6.4	9.7	8.1	< A higher skill level may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities				
Similarity of Focus Occupation to Associated Occupation: 97				
Focus Occupation: Budget Analysts (13-2031)				
Associated Occupation: Financial Analysts (13-2051)				
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Written Comprehension	11.0	15.0	14.3	0 Current ability level may be sufficient
Deductive Reasoning	10.6	14.1	11.8	< Improvement in current ability level may be required
Written Expression	9.8	13.9	11.8	< Improvement in current ability level may be required
Near Vision	11.1	12.6	11.0	< Improvement in current ability level may be required
Number Facility	6.3	11.6	15.0	>> Current ability level is likely more than sufficient
Mathematical Reasoning	6.3	11.0	14.0	>> Current ability level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

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tions on their required quarterly unemployment insurance reports — the linchpin of the Alaska Occupational Database, or ODB. This is unique to Alaska, and it provided the opportunity to study the occupation-to-occupation movements of workers from 2001 to 2009. Instead of relying on assumed wisdom to determine occupational relationships, we were able to support them (or reject them) using quantifiable data.

However, Alaska has low employment for some occupations, and gathering enough data — even over a nine-year period — is not always possible. Reporting occupations accurately can also be a challenge for some employers, and misreporting can occasionally result in misleading results.

For any project of this nature, it would have been unwise to rely on only one piece of information and ignore a wealth of other available data. For this reason, we incorporated extensive analysis of job characteristics from O*NET (Occupation Information Network). The O*NET database contains analyst ratings for knowledge, skills, and abilities; detailed work activities; tools and technologies; and education, training, and experience requirements for a variety of occupations. We also used U.S. Bureau of Labor Statistics wage estimates to help determine the relative levels of the occupations on the lattice.

By combining these other sources of data with the results of our study of worker transitions, we were able to make confident choices about which occupations are most related to one another and their relative levels.

We'd like to hear from you

We're interested in your feedback and in knowing who is using the Alaska Career Lattice and how you're using it. Contact todd.mosher@alaska.gov.

Visit the Alaska Career Lattice at live.laborstats.alaska.gov/cl/cloccs.cfm.