All I Want is a Job
The Future of Employment
— and What it Means for Planning

APAColorado 2018 State Conference
Keystone – October 2018
The Panel

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**Beth Fischer**
- Senior Technical Advisor, Intrahealth International

**Shay Coburn**
- Town Planner, Ridgway, CO

**Don Elliott**
- Director, Clarion Associates
This Session

1. Lots of Evidence that the Nature of Employment is Changing

2. How is Denver Expecting Employment to Change?

3. How are We Trying to Prepare People for Changing Jobs?

4. What Does it Mean for Community Planning?
The Changing Nature of Employment

We Know Some of the Changes

• Decline in manufacturing jobs
• Rise of robotics
• More part-time employment
• More people working more than one job
• Pressures to reduce benefits
• Wages are not keeping up with housing prices
• Rise of Artificial Intelligence and Big Data processing
The Changing Nature of Employment

Key Questions

1. Is technology creating more jobs than it is eliminating?
2. How do we prepare people for the moving target of employment?
3. Will new forms of employment require more – or less – workspace?
4. What types of workspaces will be needed to accommodate new forms of employment?
The Changing Nature of Employment

Rate of automation
Division of labour as share of hours spent (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Human</th>
<th>Machine</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>71</td>
<td>29</td>
</tr>
<tr>
<td>2022</td>
<td>58</td>
<td>42</td>
</tr>
<tr>
<td>2025</td>
<td>48</td>
<td>52</td>
</tr>
</tbody>
</table>

The Changing Nature of Employment

Exhibit 8: Probability of a job becoming automatable

- Loan Officers: 98%
- Receptionists and Information Clerks: 96%
- Paralegals and Legal Assistants: 94%
- Retail Salespersons: 92%
- Taxi Drivers and Chauffeurs: 89%
- Security Guards: 84%
- Cooks, Fast Food: 81%
- Bartenders: 77%
- Personal Financial Advisors: 58%
- Computer Programmers: 48%
- Reporters and Correspondents: 11%
- Musicians and Singers: 7%
- Lawyers: 4%
- Physicians and Surgeons: 0.4%
- Elementary School Teachers: 0.4%
The Changing Nature of Employment

<table>
<thead>
<tr>
<th>Category</th>
<th>Computation (Structured)</th>
<th>Analysis (Unstructured)</th>
<th>Problem-Solving (Driverless Cars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation &amp; Storage</td>
<td>2%</td>
<td>22%</td>
<td>28%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2</td>
<td>23</td>
<td>20</td>
</tr>
<tr>
<td>Construction</td>
<td>3</td>
<td>16</td>
<td>23</td>
</tr>
<tr>
<td>Administrative &amp; Support Services</td>
<td>3</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>Wholesale and Retail Trade</td>
<td>4</td>
<td>22</td>
<td>12</td>
</tr>
<tr>
<td>Public Administration &amp; Defense</td>
<td>8</td>
<td>22</td>
<td>8</td>
</tr>
<tr>
<td>Financial &amp; Insurance</td>
<td>6</td>
<td>17</td>
<td>4</td>
</tr>
<tr>
<td>Information &amp; Communication</td>
<td>7</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>Professional, Scientific &amp; Tech</td>
<td>1</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Accommodation &amp; Food Service</td>
<td>2</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Human Heath &amp; Social Work</td>
<td>1</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Changing Nature of Employment

Job automation will hurt women first but will ultimately hurt men more
(Public Policy Institute)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Algorithm*</th>
<th>Augmentation</th>
<th>Autonomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2%</td>
<td>14%</td>
<td>18%</td>
</tr>
<tr>
<td>Female</td>
<td>4</td>
<td>19</td>
<td>3</td>
</tr>
</tbody>
</table>
The View from Denver

Jeff Romine
Preparing People for New Jobs
Transforming Parents’ Lives and Improving Children’s Futures. Together.
Serving over 4,600 families since 1974

1323 Gilpin St. Denver, CO 80218
www.warrenvillage.org
Warren Village exists so low income, single parent families can achieve sustainable personal and economic self-sufficiency.

OUR MISSION

Warren Village is a nationally recognized leader for moving people from poverty toward self-sufficiency.

OUR VISION

Across the US, fewer and fewer families can afford a roof over their head. In the last year alone, the cost of housing in Denver rose 15 percent, forcing many metro area families out of their homes.

In fact, over HALF the people experiencing homelessness in Denver are families with children…
Warren Village exists so low-income, single-parent families can achieve sustainable personal and economic self-sufficiency.
College to Career Initiative
Why Focus on College or Post-Secondary Education?

Research shows us that a person’s level of education is directly related to their earning potential as well as to their life-expectancy and long-term health.
College to Career

What is it?

Warren Village program emphasis designed to increase resident participation in identified employment opportunities or concentrated workforce training programs that will provide work skills and/or experience necessary for jobs that pay family sustaining wages.

End Goal: career-specific training that moves students further and faster toward certificate or degree completion and into the workforce.
We focus on “Middle-Skills” Jobs and Top Jobs for Colorado. These are jobs that meet three criteria:

Education = Require two years or less post-secondary education. 
(Many identified careers require less than a four-year degree.)

Need = Will be “in demand” jobs or growing fields over the next 5 years

Wages = employment that results in family-sustaining wages based on family size.
The College-to-Career program is informed by the “Top Jobs” for Colorado as published in the annual Talent Pipeline Report published by the Colorado Workforce Development Council.

- Tier 1 includes jobs that have median earnings at or above a living wage for a family with two adults (one working) and one child ($24.19/hr.). This is an increase of $1.29 over the previous year’s living-wage benchmark.

- Tier 2 includes jobs that meet a living-wage benchmark for an individual (median earnings of $11.82/hr.). This is an increase of 49 cents over the 2016 benchmark.

High Demand and Growing Industries in Colorado

- Healthcare Practitioners
- Business Operations
- Information Technology
- Cybersecurity
- Advance Manufacturing
- Construction

https://www.careersincolorado.org/#/home
Tier 1 Top Jobs - Projected Annual Openings by Occupation Cluster

- Healthcare Practitioners & Technical: 5,074 (23%)
- Business & Finance: 4,267 (19%)
- Management: 3,928 (18%)
- Computer & Mathematical: 3,301 (15%)
- Architecture & Engineering: 909 (4%)
- Education, Training & Library: 885 (4%)
- Life, Physical, & Social Science: 869 (4%)
- Installation, Maintenance & Repair: 734 (3%)
- Construction & Extraction: 642 (3%)
- Arts, Design, Entertainment, Sports & Media: 392 (2%)
- Sales: 259 (1%)
- Community & Social Service: 184 (1%)
- Healthcare Support: 87 (0.4%)
- Transportation & Material Moving: 44 (0.2%)
- Production: 40 (0.2%)

Share of annual job openings for jobs that show high growth (>2.05% annually), high openings (>40 annually) and pay a living wage for a family of three with one working adult ($24.19/hr.).

Source: CDLE LMI data
Appendix A1

### Sample of Tier 1 Top Jobs requiring a 2- or 4-Year Degree

<table>
<thead>
<tr>
<th>Job Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Therapists</td>
</tr>
<tr>
<td>Registered Nurses</td>
</tr>
<tr>
<td>Diagnostic Medial Sonographers</td>
</tr>
<tr>
<td>Radiologic Technologists and Technicians</td>
</tr>
<tr>
<td>Medical and Clinical Laboratory Technologists</td>
</tr>
<tr>
<td>*Licensed Practical Nurses</td>
</tr>
</tbody>
</table>

* A Tier 2 job but a common starting point for Warren Village residents interested in becoming a registered nurse.

Other Tier 1 jobs are included on the Top Jobs list and required Master’s or Doctoral Degrees.
We recommend career tracks that offer “laddered” or stackable degrees or certificate programs.

- Students will gain enough skills to secure a job with the first certificate, but with two or more degrees, they will be paid more.

- Allows students to “Learn and Earn”, allowing quality employment while continuing on in school.

- Only nine percent of Top Job openings are for middle-skill jobs—a job that typically requires additional education beyond a high school diploma but less than a bachelor’s degree – demonstrating an overwhelming need for further education for a single-parent to achieve a family sustaining wage.

- Stackable certificates can also lead to a variety of related bachelor degree programs.
Paralegals and legal assistants do a variety of tasks to support lawyers, including maintaining and organizing files, conducting legal research, and drafting documents.

- **Entry-Level Paralegal Salary** of $18.00 an hour.
- **Paralegal Salary with two-year degree** = $23.00 an hour.
- **Paralegal or related Legal Field Salary with a four-year degree** = $30.00+ an hour.

**A Stackable Certificate in Paralegal**

- Bachelor of Science
- Associate of Applied Sciences
- Paralegal Certificate

Paralegals and legal assistants do a variety of tasks to support lawyers, including maintaining and organizing files, conducting legal research, and drafting documents.
On-Site Classes

Our agency partnership with the Community College of Denver
• Brings college credit classes onsite to Warren Village
• Provides specialized support for clients and small, supportive learning environment
• Helps eliminates barriers to success with a dedicated Family Advocate
* Enrollment services
* Financial aid education and FAFSA applications
* Textbooks and school supply assistance
* Scholarships
* Tutoring
* Evening study hall hours with childcare
* Extended access to the computer lab
* Potential for a third-year extension to complete education program
* Partnership with Educational Opportunity Center
Outcomes FY’18

At Exit

- Increased Earning Power (60%)
- Increased Income (56%)
- Permanent Housing (80%)
- Life Skill Development (83%)
- Increased Personal Competency (73%)
Teresa
Completed the 15-week Denver Sheriff Training Academy, was hired upon graduation at $25.00 an hour and was able to purchase her own home.

Savanna
Earned her certificate for Emergency Medical Technician and is continuing on for her Associate’s degree in para-medicine at the Community College of Aurora.
A student at the Community College of Denver, Kelly

- Participated in on-site classes at Warren Village to complete some of the required classes for her Dental Assisting Certificate.

- Now working on her Associate’s degree to become a Registered Dental Hygienist within two years. This will open the door for her to work at entry wages of $35 to $45 per hour.

- After that, considering CCD’s new option for a Bachelor of Applied Science (B.A.S.) degree in dental hygiene.
The View from Ridgway
A Rural Perspective
Q35: What is your current employment status? Please select the response that fits your employment situation best.

- Employed full time (40 or more hours per week)
- Self-employed
- Retired
- Employed part time (less than 40 hours per week)
- Other (please specify)
- Homemaker/full-time parent or caregiver
- Temporary work/odd jobs
- Student
- Disabled and unable to work
- Unemployed and not currently looking for work
- Unemployed and currently looking for work

Percent of Responses

Ridgway Resident | Non-Resident
A Rural Perspective

Q36: Where is your workplace located?

Percent of Responses

0% 5% 10% 15% 20% 25% 30% 35% 40%

- Town of Ridgway
- City of Ouray
- Unincorporated Ouray County
- Montrose
- Telluride/Mountain Village
- I work from home
- Other (please specify)

Ridgway Resident  Non-Resident
A Rural Perspective

YOU MAY HAVE TO WORK, BUT YOU DON'T HAVE TO WORK ALONE

JOIN TODAY

Get started
A Rural Perspective
What Does it Mean for Planning?

1. Need for space may not correlate with employment gains or losses
   - Fulfillment/logistics needs space although increasingly automated
   - Industrial may require more space because robots can be competitive when humans cannot

2. A job does not necessarily mean a dedicated workspace
   - Working from “third places”
   - Working from home
What Does it Mean for Planning?

3. Continued demand for generic office working space
   • Most expanding sectors are desk jobs
   • Some will be through conversions
   • We Work and others will be branded
   • But workspace per worker may continue to drop

4. More space for service uses
   • Food, drink, and entertainment
   • . . .  Watch out for volatility
   • Elderly care and services
5. More space for education and medical campuses in medium and large markets
   • At least for a while

6. Less space for retail
   • Especially in the middle of the income spectrum
   • Survivors will want and need less space
   • With some exceptions
What Does it Mean for Planning?

Percent of employed persons who worked at home on an average workday

<table>
<thead>
<tr>
<th>Job holding status</th>
<th>Class of worker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single jobholders</td>
<td>22</td>
</tr>
<tr>
<td>Multiple jobholders</td>
<td>39</td>
</tr>
<tr>
<td>Self-employed workers</td>
<td>64</td>
</tr>
<tr>
<td>Wage and salary workers</td>
<td>19</td>
</tr>
</tbody>
</table>

NOTE: Data include all employed persons age 15 and over on days they worked. Working at home includes any time persons did work at home and is not restricted to persons whose usual workplace is their home. Data include all days of the week and are annual averages for 2010.

What Does it Mean for Planning?

Not all jobs are counted – Lots of Undeclared Workspaces
What Does it Mean for Planning?

7. More working from home
   • Likely a wider variety of activities
   • Whether you allow it or not

6. More difficulty knowing who is working where, and what they are doing, so you can plan for it
Questions ?