MPIA Member Survey Results
2020

Montana Photonics Industry Alliance
Summary of the Survey

In 2020 the MPIA conducted a survey of the member companies. Here is a summary of the survey:

- 20 of our 26 paying member companies completed the survey
- Survey was conducted via survey monkey
- Improvements to the survey will be made and another survey will be conducted in 2022
- The last survey was conducted in 2017
- The MPIA plans to conduct surveys every two years moving into the future
- Please email additional questions or improvements you would like to see on the next survey to admin@montanaphotonics.org
What is the total number of employees at your Bozeman facility?

**Key Takeaways:**
- Taking the average of all of these bands and the percentage of companies that fall in each band. Our mean estimate of total number of employees in the valley is ~810.
- This is a 22% increase from our previous survey.
Key Takeaways:
- Of the surveyed companies, Montana gained a total of 65 employees net in photonics from 2018 to 2019. This represents a nearly 10% growth in total employees in a one year time span.
What is your average base salary? (not including benefits, bonuses, stock payouts)

Key Takeaways:
- Of the surveyed companies, the average salary across all companies (for all employees in the companies) is ~$72,000
- This is a 10% increase from the last survey
At your Montana facility, estimate the % increase or decrease in revenue for 2019 vs 2018?

Key Takeaways:
- Of the surveyed companies, the aggregate growth in revenue for the photonics industry in Montana is expected to be ~140%
At your Montana facility, do you export any of your products outside of the US?

Key Takeaways:
- A majority of our companies export outside the US.
If yes, what % are exported? and into which primary country?

- Exported out of the US

- Canada: 10%
- Mexico: 75%
- Asia: 10%
- Europe: 12%
- UK: 10%
- China: 45%
- India: 10%
- Korea: 50%
- Australia: 10%

Other - 30%
For your Montana facility what do you find to be most challenging operating your business here?

- **Travel:**
  - Cost of travel in/out of Bozeman/lack of direct flights

- **Recruiting, Hiring, Personnel:**
  - Finding high quality, right talent to hire (including graduates)
  - Filling lower mid-level management positions
  - Finding the best combination of education, skills and personal fit in employees

- **Government:**
  - Government Contracting / State and Federal Regulations

- **Shipping:**
  - Shipping costs/DHL shipping
  - Finding individuals knowledgeable about international shipping.

- **Facilities:**
  - Lack of facilities

- **Geography:**
  - Fewer bigger events that are local.
    - For instance, if we were located near San Francisco or Boston, then we could easily attend trade shows/business events and bump elbows with a greater variety of business leaders.
    - Brining more events/speakers here would help this

- **Investment Capital:**
  - Finding access to investment capital

- **Supply Chain:**
  - Buying supplies locally

- **Marketing:**
  - Most of our clients are in communities with many local design firms. We need to somehow become “visible” to companies that can use our services.

- **Cost of Living:**
  - Increased cost of living driving wages for production employees
What do you feel the MPIA could do for your Montana facility? How can we help with current challenges? (ex: training, conferences, website content… etc.)?

- **Training:**
  - Training opportunities / Training workforce / Seminars
  - Training on: production, forklift, safety, operations excellence, breaking into international markets, ERP or CRM System Introductions, HR, management, sexual harassment, diversity, technical management, lower-level managers on financial principles

- **Marketing:**
  - Recommendations on marketing platforms and strategies
  - Increase exposure across nation for Bozeman opportunities
  - Providing market-level analysis on sales trends, etc.
  - Build the MONTANA brand identity for the industry – which will draw business and talent

- **Hiring:**
  - Looking for better ways to post opening and attract talent
  - Workforce Development
  - Draw more talent to the valley
  - Advertising local opportunities - job postings & internships

- **Conferences:**
  - Conference will support brand and draw talent
  - Work to establish at least one annual conference in Bozeman
  - Run its own OPTEC like event or have larger presence to better connect local business beyond social

- **Website:**
  - Website content

- **Local networking:**
  - Opportunities for networking
  - Build a strong network of businesses willing to help each other
  - Encourage growth of local vendors to support our Industry

- **MSU:**
  - Improved collaboration with MSU

- **Cost of Living:**
  - Salary information and the cost of living in the valley

- **Promote:**
  - Promote MT as a wise investment for coastal investors

- **Community outreach:**
  - We need high school students & their parents thinking about photonics

- **Sharing:**
  - Have local businesses provide webinars as to biggest lessons learned that helped them be sustainable and successful over the years
  - Manufacturing lessons
What training/professional development would benefit the employees at your Montana facility right now or in the future?

- Accounting
- Assembly technician
- CRM or ERP training
- Database creation to track products/manufacturing—go over platforms/options and best practices
- Electronic technician skills
- Engagement in the success of the company
- Engineering
- Fiber optics skills
- Geometrical optics for engineers who don’t have optics knowledge
- Hiring Process
- How to create high quality, effective Power Point presentations
- IPC/IPC Solder training
- International shipping
- Inventory systems
- Laser safety training
- Leadership Training
- Looking forward to having Jean Luc Dumont back again to speak about good presentations
- Making Sales Presentations – How to for on-line (and in person)
- Manufacturing
- Marketing
- Mathematics
- Maybe some workshops on starting a business
- Mechanical designs for optical systems
- Product launch examples – benchmarks, materials, timelines
- Project management
- Public Speaking
- Quality
- Racism Training—Prejudice Awareness
- Sales training
- Service/support systems including tracking, integration with production flow, materials/literature
- Technical management training
- Website Development
How many employees will the company be adding in the next three years?

Key Takeaways:
- Of the surveyed companies, the industry expects to gain an additional 180 employees over the next 3 years (before the end of 2023)
- This will put us well over 1000 employees by 2023.
What curriculum suggestions do you have for Montana State University (MSU)/Gallatin College to support your Montana based business?

- Accounting/Accountants
- Advanced manufacturing process
- Advanced Soldering
- As much hands-on experience in labs as possible
- Assistance / trained staff in technical marketing
- Business Financial as relates to R&D
- Cryogenics studies
- Cryogenics technician-Gallatin College/Cryogenics studies
- Electrical Engineering
- Electrical Tech
- Electronics Tech – more troubleshooting
- Electronics technician – Gallatin College
- Entrepreneurship in Photonics
- Familiarity with oscilloscopes and similar
- Fiber Laser Manufacturing
- Fiber optics
- Finite element analysis
- I like the basic tech training now in place
- Instrumentation design
- ISO 9001: 2015 Certification (+1)
- It’d be helpful if mechanical engineers had some basic optic knowledge (geometrical optics) when they graduate and/or machining design for optical systems
- Laser-material interaction, particularly ultrafast(fs)
- Manufacturing technicians
- Marketing and Sales
- Marketing high-tech / photonics – needs technical & marketing skills
- Optical engineering
- Optical technicians
- Optics/optical components manufacturing
- Optics/Photonics Tech
- PCB design and layout
- Programmers C/C++/C#
- Project Management (+4)
- Quantum Studies
- Schedules (+1)
- So I’m glad to see this question
- Strong Electrical and Mechanical Engineer candidates
- Strong Physics/Technician candidates
- Technical marketing-oriented writing (brochures, product blog posts, etc.)
- Technical user-oriented writing (product manuals, user notes, etc.)
- The tech program has been very valuable to us
- Understanding of nonlinear interactions (OPO’s, OPA’s, etc)
- We’re going to be evaluating the optics offerings at MSU
Which COVID-19 related developments have affected your business? Select all that apply

COVID-19 Related Business Impacts

- Decline in Business: 52%
- Drop in Customers: 36%
- Reduced access to clients and customers due to remote work: 64%
- Supply chain issues: 60%
- Difficulty obtaining personal protection equipment and supplies: 20%
- Decrease employee productivity: 44%
- Employees laid off or furloughed: 4%
Which types of assistance have you needed or expect to need in the short term (during the COVID-19 impacted period)? Select all that apply

- Access to Capital: 36%
- Tax relief: 28%
- Business, marketing or legal consulting: 24%
- Staffing assistance: 24%
- Trade assistance: 12%
- None: 48%
Are you interested in retraining and/or assistance from Montana Manufacturing Extension Center (MMEC) and/or Manufacturing Extension Partnership (MEP)?

- MMEC might be interesting for our company. We have a new leader in production and an intro there makes sense
- No (+8)
- Yes/Possibly
- Already got it