**Elevate Quantum Workforce Collaborative**

**CNM Ingenuity – EQWC funds via State of New Mexico Technology Enhancement Fund (TEF)**

**Assumptions**

* $1.04M total (Year 1/2: $400k, Years 3-5: $80k) – investigate redistributing differently across the 5 years (some redistribution required for the below)
* 100% of the TEF money needs to be spent with NM institutions or within NM.
* No indirect can be charged on any funds.

**Purpose**

Drive quantum workforce training by expanding the access of 2-year and 4-year students across New Mexico to Quantum Information Science concepts and curriculum.

**Strategy** –

* Provide funding for the QWEO to run the EQWC **($100k in year 1 – need a budget adjustment to move $100k equipment from EDA to TEF, and increase Sandia subaward from EDA funds)**
* Hold annual workshops (semi-annually in the first 2 years) to facilitate educator-to-educator and industry-to-educator knowledge transfer. **($80k in years 1-5)**
  + Invite educators from EQ-region community college and 4-year institutions. Workshop costs fully covered with EQWC funds. Travel for educators from NM higher education institutions covered as well.
  + Faculty that have developed QIS modules share the modules and lessons learned from teaching with other faculty.
  + Industry leaders conduct panel sessions and/or seminars to present status/trends of QIS to educators.
* Establish an EQWC website that can serve as a one-stop location that lists workforce training programs, reference materials, internship/research opportunities, and resources for educators. **($30k years 1-2, $10k years 3-5 for upkeep)**
* Work with educators at community colleges to assistant them in developing QIS modules for existing courses and engaging broader audiences of students. Target audiences include introductory math sequence, physic I/II/III, chemistry, and computer science / computer information science. These educators would also be part of an ongoing community that would meet bi-monthly for support while implementing curriculum in the classroom. **($50k in years 1 & 2)**
* Provide funding for turn-key experimental apparatus to supplement the QIS modules developed to expand participation in QIS. Coordinate the movement of these modules between higher education institutions, as necessary.  **($100k each for year 1 and 2)**
* Provide partial funding for CNMI Quantum Program Manager (33%) **($30k annually)**

The above EQWC activities will be driven by a CNM Quantum Project Manager (33% of their time will be dedicated to this). This individual will run the logistics of the annual workshop, coordinate the bi-monthly support sessions, maintain the website, coordinate activities between educators developing the QIS modules, maintain a central repository of QIS module materials, and manage the loan of experimental equipment between institutions.

Finally, the above would be done complementary to the CU-Boulder efforts. The workforce leads at both institutions would meet early in the process to maximize the benefit of all of the workforce programs.

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| **Task** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Total** |
| EQWC Operation (QWEO) | $100,000 |  |  |  |  | $100,000 |
| Annual Workshop | $80,000 | $80,000 | $80,000 | $80,000 | $80,000 | $400,000 |
| Website | $30,000 | $30,000 | $10,000 | $10,000 | $10,000 | $90,000 |
| Coordinate QIS module development and distribution | $50,000 | $50,000 |  |  |  | $100,000 |
| Equipment for QIS modules | $50,000 | $150,000 |  |  |  | $200,000 |
| CNM PM (33%) | $30,000 | $30,000 | $30,000 | $30,000 | $30,000 | $150,000 |
|  |  |  |  |  |  |  |
| **Total** | **$340,000** | **$340,000** | **$120,000** | **$120,000** | **$120,000** | **$1,040,000** |