Case Study: Isthmus Engineering

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Introduction

Isthmus Engineering is a verdant example of a highly democratic worker-owned firm operating in an industrial sector that one might not think of as fertile ground for participatory democratic governance—the design and manufacture of highly technical custom automation machinery.

The firm began, as many small businesses do, as a partnership of colleagues. Engineers may not tend to be the most radical of fellows, but in the hotbed of student unrest that was Madison, Wisconsin, USA in the 1960s and 1970s, concepts such as questioning authority and challenging ideas of “business as usual” were hard to miss. With the anti-Vietman war movement in full swing, these future cooperators—at the time simply employees of conventional engineering firms in town—found themselves increasingly uncomfortable with the idea that some of their work efforts were going to benefit defense contractors and promote the business of war rather than contributing to peace and prosperity. They also quickly discovered that junior engineers weren’t really welcome to ask those kind of questions. So a small group of three mechanical engineers joined with a part-time bookkeeper and decided to strike out on their own, creating a partnership together to conduct their work in a different way. The year was 1980. At first the partners did contract engineering for other firms in the area, choosing projects that aligned with their values. A move to a leased facility allowed the group to add a machine shop. For the first time, they had the capacity to guide an idea from concept to a fully functional machine. This interactive design process would become a hallmark of the growing firm, which in the first two years had tripled in size to nine partners.

By the fall of 1981 it was clear to the group that some sort of change was needed. Now that the firm was involved in manufacturing as well as design, they did not want the liability inherent in a partnership legal structure. Yet a conventional investor-owned corporate structure did not seem to be the right fit either. Fortunately, just at that time, three of the partners traveled to Minneapolis to attend a co-op conference, and there they heard about the success of the Mondragon industrial cooperatives in Spain. Inspired by this tale, eight of the partners—including not just engineers but two machinists and the bookkeeper in their mix—formally incorporated Isthmus Engineering and Manufacturing (IEM) as a worker cooperative on January 1, 1983. From the beginning, membership in the cooperative has
been open to any worker, regardless of role or skill level. All members held (and still hold) a position on the board.

At first, the firm worked largely in the automotive industry for a small group of core customers. A turning point came in the late 1980s when the co-op decided they needed to build their own manufacturing facility. The move allowed the growing firm to tailor their space to the needs of a much wider array of customers; but the move was not without risk. Co-op leaders were required to personally co-sign the loan for the building, with some members’ houses taken as collateral. The decision to move firmly forward into specialized manufacturing proved prescient however, and the cooperative continued to grow rapidly. Membership increased from the original eight to 50 people by the mid-1990s.

When the partners first started, 90 percent of the cooperative’s work came from within a five-mile radius of its Madison shop. With the new building facility, the co-op was able to expand beyond local concerns to a growing list of national and even international clients. Importantly, the new space also meant that they were able to target their work to the needs of larger, more innovative companies working in emerging sectors such as consumer products, medical equipment and solar. Isthmus moved to an even larger facility in 2004, allowing the co-op to build even larger, more complex machines for a high-end, discerning customer base. By this time, the co-op was successful enough to self-finance this second move; this time, no member had to give a personal guarantee for the loan.¹

The cooperative now has a workforce of around 80 and is a leader in the highly technical field of advanced custom automation equipment manufacturing. Unlike in their early days, today financial institutions routinely compete for the pleasure of financing this very successful enterprise.

Member and stakeholder participation

Rapid growth at Isthmus has certainly led to some changes. Yet in many important ways, growth has also led the cooperative to solidify some of the most important stakeholder

elements that the founders put in place 40 years ago, including an all-member board and a highly entrepreneurial and participatory work culture.

Members must be an employee of Isthmus for at least two years before applying for membership. Only one new member application will be considered at a time. After making a formal application and undergoing an introductory interview, a new member prospect must attend and participate in board meetings for at least three months before undergoing a second interview, followed by a vote of all the members. Approximately 80 percent of Isthmus’s current members must vote “yes” in order for a new member to be accepted. Interestingly, it takes a vote of only 51 percent to remove a member, a far lower threshold. The reasoning is, as members of the co-op note, if over half of the co-owners don’t want someone in the business, it is probably best that they leave. While the situation of a member being expelled has historically been exceedingly rare, it underscores the importance placed at Isthmus on operating as a well-functioning team.

Isthmus helps prospective members learn about the co-op through an open seminar on cooperative history and practice, held every 6-8 months. Held after-hours in a relaxed, social atmosphere, employees, current members and even family members are encouraged to attend to learn about the co-op’s history, ask questions, and generally figure out if co-op membership is for them.

In 2021, membership at Isthmus is about 40 worker-owners out of a workforce of just under 80. Some non-members are waiting to acquire the necessary two years of employment in order to be eligible for membership; others enjoy being long-term employees of Isthmus, but don’t choose to join. Currently five (12.5 percent) of the 40 Isthmus members are women with several more on track for membership; the co-op boasts a high percentage of female workers in general (20 percent) compared to others in the very male-dominated field of engineering. A few years ago, two women were elected to serve as President and Vice President of the board at the same time, a level of leadership by women that is quite rare in the industry, and which was a point of pride for Isthmus.

When the co-op started in the early 1980s, the original membership share was set at $3,000 USD. Today it is $15,000 USD—a substantial sum, but an amount which, given the co-op’s financial success and strong reputation with customers, a new member will typically make back rapidly in the form of shared annual surplus or profits. The co-op uses a modified Base Capital type plan to try and ensure that each member investment in the cooperative is
approximately equal. Thus, new members will receive relatively more of their patronage in the form of non-voting stock rather than cash, while longtime members who have more invested in the co-op already will receive a greater proportion in cash. In addition to their initial required paid-in capital, most Isthmus members have an additional $25,000 USD invested in co-op stock based upon their share of past surpluses.

From the beginning, Isthmus members included environmentalism and sustainability amongst their core values, and the ways they would practice the cooperative principle of "concern for community". The co-op generates energy for their high-tech manufacturing operations with the aid of solar panels on the roof of their building along with other renewable energy sources. Sustainable design principles were used throughout the construction of their new facility, ensuring ongoing energy savings and smart use of energy resources.

The co-op is also an avid practitioner of cooperative principle six, "Cooperation amongst cooperatives". An active member of the U.S. Federation of Worker Cooperatives, Isthmus is known as a reliable and generous contributor of time, expertise and other resources to any co-op in need. When the COVID-19 pandemic hit for example, many worker-owned home care cooperatives were caught short, without sufficient Personal Protective Equipment needed to keep their workers and clients safe. The call went out for help, and Isthmus answered, donating bulk face shields to home care cooperatives across the country. “I had never even heard of this engineering co-op, and there they were sending us face shields when we really needed them” marveled Nora Edge, Administrator, Capital Homecare Cooperative in Olympia, Washington; “Isthmus Engineering’s contribution helped us feel both safe in our work and supported in our cooperative community”.

**Organizational structure**

From the beginning, all of the members of the cooperative have been entitled to a seat on the board. When Isthmus first transferred from a partnership to a worker-owned cooperative, none of the original eight members wanted to step off the board. And so

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2 Personal communication, April 12, 2021.
everyone was included, and still is today. As time went on and the business grew and more members joined, “it was assumed that they too would sit on the board. This became standard procedure” according to the Isthmus Owners’ Manual. But open access to leadership should never be confused with leadership that is treated lightly; quite the opposite. “The members of Isthmus are in business with each other, not just working for the same company” notes the manual, and as such, every member is expected to bring their best thinking and decision-making prowess to bear, for the good of the entire operation. It is not a role that is a good fit for everyone, and as such, not every Isthmus employee chooses to apply for membership.

The seriousness of membership is underscored in other ways as well. As an employee, a worker has access to a full suite of employee benefits including paid healthcare and paid time off.\(^3\) In contrast, as a worker-member at Isthmus, a person works instead for a share of the profits, or surplus that is earned every year. Worker-members can purchase their healthcare and other benefits through the co-op, but at their own expense. Similarly, members are free to negotiate time off with the managers of the projects they are working on, but time away from work is not compensated at an hourly rate the way it is for non-member employees. In a good year, member-owners at Isthmus take home significantly more in terms of compensation than they would as an employee; but in a tough year—which has happened perhaps two or three times in the last 30 years—they may make less. But of course co-op membership is not all—or even mostly—about money. This shared risk-taking of membership is coupled with shared decision-making and is a vital part of the Isthmus ethos to operate as closely as possible to a true democracy. While this is not always easy, the impact is powerful, helping members to feel closely tied to the business. “It’s certainly not like I was thinking ‘I want to get some more authority’ or something (from becoming a member)”, explained longtime member Brian Mueller, “It was like . . . you just want to be part of it; you want your name on the door, you know what I mean?”\(^4\)

Board officer positions are elected annually, and while the same person may hold the role for two years running (particularly in complex positions such as Treasurer), the practice is to rotate leadership amongst the members. Officers are paid their regular hourly wage for board work, but there are no extra perks and they are still expected to get their regular

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\(^3\) In the U.S. healthcare coverage and other benefits are most commonly offered at the workplace level; there are relatively few government-guaranteed benefits compared with other industrialized countries.

\(^4\) Interview with Brian Mueller, February 25, 2021.
project work done. “These are not positions of power, but facilitators’ positions” noted member Olson. “[Holding an officer position] is burdensome, and we don’t get any more money for it . . . it’s a lot of pressure . . . It’s an honor to be elected, but a burden as well”.

The Isthmus Board of Directors meets twice a month, year around. In the beginning, board meetings would take four, five, or even six hours to get through the agenda. Formal facilitation training accessed through their membership in the U.S. Federation of Worker Cooperatives (USFWC) helped Isthmus members to learn to focus better and shorten their meetings. In the course of conducting their core business, Isthmus ended up having several members professionally certified in project management as well. The additional skills learned in that process aided co-op members in further streamlining their decision-making process, while keeping in place the vital aspects of member participation. Board meetings now typically run an hour or so. In a show of reciprocity and gratitude for the facilitation training that Isthmus members had received through the Federation in earlier years, longtime Isthmus member Brian Mueller now regularly teaches project management skills to other worker-owners at USFWC conferences.

Members of the co-op are actively engaged in setting the agenda for each meeting. The Executive Committee⁵ of the board keeps a running log of discussion topics and committee reports that are pending. While it is the core job of the Board President to act as facilitator at the board meetings, it’s the Vice President’s job prior to the meeting to nudge committee chairs and make sure all the needed information is collected and distributed, and that everything’s on track for a productive board meeting. Every member has access to the topics log, and any member can request time on the board agenda for any topic they believe to be important. However, anyone requesting time from other board members is required to take ownership of the topic they are proposing. This means providing relevant information for distribution beforehand and letting everyone else know what specific outcome they are looking for from the rest of the board. A request with insufficient background to allow for a focused discussion and decision might be sent back to the proposer for further work. Unlike at many other organizations, the Executive Committee of the Isthmus board is primarily a coordinating body, helping to

⁵ At Isthmus, the Executive Committee of the Board is made up of all four officers plus the Operations Manager and the HR Manager.
facilitate smooth and efficient decision-making by the board, rather than making decisions themselves. They are empowered to make short-term decisions as needed if the board cannot be convened quickly. But as the board meets in full every other week, this is seldom necessary.

Isthmus makes active use of the committee structure as a core tool of democracy. At any one time there are 10-15 committees at work, both standing committees such as HR or finance, and ad hoc committees built around a particular project, issue or opportunity. Members sign up for committees once a year, and the Executive Committee works to balance membership, encouraging people to move around and learn different parts of the business. Many new members, for example, serve on the finance committee initially in order to get a firm grounding in the business side of operations. Some committees, such as Human Resources have a permanent staff person assigned to them to ensure continuity.

One exception to the practice of moving members around is a permanent committee called the Issues and Resolution Council or IRC. Members of this committee serve three-year terms, and only the most senior and well-respected co-op members are encouraged to apply. The IRC is charged with resolving disputes or handling certain personnel issues of a sensitive nature that do not rise to the level of board action, or that may require timely resolution between bi-weekly board meetings. The committee was particularly useful during the recent pandemic, for example, acting quickly to close the building to visitors and taking prompt action regarding workers testing positive for COVID while keeping personal medical information confidential.

Anyone at Isthmus (member or employee) can serve on most of the many committees that support the cooperative’s decision-making process, although certain committees are members-only. “People learn about [the co-op] by taking part in it, by participating” notes longtime member Ole Olson. Anyone at the co-op can also attend the open portion of each board meeting to get a better feeling for how decisions are made.

Before a committee can begin its work, it must fill out a committee charter, defining its responsibilities, accountability, stakeholders, expected deliverables and timeline for getting things done. The charters are an important element both of governance and participation at

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6 The HR Committee, in contrast, is charged with overseeing more predictable, everyday personnel matters.
7 Interview with Ole Olson, February 2, 2021.
Isthmus. The limits of the charter protect against “scope creep” by over-enthusiastic committee members, who might otherwise wander, or tackle issues or subjects that are beyond what was intended to be delegated by the board when the committee was created. While most key decisions are still made by the Board, the widespread participation and assignment of vital information-gathering and evaluation tasks means that it is shopfloor workers who have a direct role in evaluating the purchase of new equipment, rather than having those decisions made solely by administrative staff in the finance department. And because virtually all of Isthmus’s work is project-based, every worker comes to their committee assignment with intimate knowledge of how the production process at the company works. This further facilitates informed and participatory decision-making.

The following chart illustrates how both members⁸ and other employees are involved in governance structures at Isthmus. Of the two key staff positions, the externally-focused one, that of Sales Manager, is always held by an employee who is not a member. The core internally-focused staff position of Operations Manager could be either an employee or a member. The membership of five standing committees (Executive, Finance, HR, Customer Relations and IRC) are limited to Isthmus members only. All of the other standing committees as well as any ad hoc committees chartered by the board are open to both member and non-member employees.

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⁸ All members are also employees, so members are really a sub-set of employees not a different group.
Participatory process and information sharing

In addition to serving on the board, worker-members at Isthmus are involved in numerous ways in the day-to-day operations of their business. Compensation is one example. At Isthmus, hourly compensation for each worker-member is based on their hourly "skill factor," a measure assessed annually for all Isthmus members by the other members of the co-op. It is based upon job duties, skill level, experience, work ethic and a variety of other factors. In this way, each member of Isthmus has a direct role in deciding the compensation of every other member, based upon a consistent formula linked to various metrics tied to the well-being of the cooperative as a whole. To compensate for the fact that profits may not be as high as expected in any given year, actual wages are set at 80 percent of the amount determined by the skill factor with the remaining 20 percent paid out periodically throughout the year as cash flow allows. Then, at the end of the fiscal year when the books
are closed, members receive an additional distribution of any remaining surplus as patronage.

In addition to the open portion of each board meeting, the co-op also hosts a company-wide meeting over lunch each Wednesday to go over every current job they are working on, as well as its status and financial standing. The meeting is open to both members and non-members. In this way, information is widely shared both inside and outside of the boardroom. Having a well-informed workforce saves the co-op time in a number of other ways. When the board is faced with requests for capital expenditures, for example, everyone already is familiar with the parameters of the project in question, what funds have been spent previously and with what result. The request would also have already been vetted by a committee of peers before coming to the board, so it is easy for the board members to make a sound determination when the time comes to vote at a meeting.

The Wednesday meetings also provide an opportunity for new employees to better understand the breadth of work being done at the co-op, and how they can most productively fit in. While most manufacturing firms are very top-down in their management structure and culture, Isthmus is the opposite. It has a very entrepreneurial work culture, and successful employees must be self-motivated and self-directed to find for themselves the kind of projects and project teams that they want to work on at the co-op. The Wednesday meetings gives everyone the opportunity to see what jobs are in process and what contracts are pending, and to meet with those in charge of different efforts. This regular sharing of information helps everyone to sort themselves out and match their own interests and skills with the needs of the cooperative.

Virtually all of the work that is done at Isthmus is project-based. On a shopfloor level, ultimate oversight responsibility for each project lies with a Project Manager, an assignment which is generally made by the Operations Manager, but involves consultation with the other Project Managers as well. As the key internally-focused staff member, the Operations Manager is generally in the best position to have the most comprehensive view of the allocation of resources, skill and time throughout the organization; but his voice is not the only one that is considered in making staff assignments. Workers on a project operate as a team, with each member expected to consider the goals, deadlines and overall workflow of

The taste for teamwork, consultation and self-determination is one that is cultivated early and often for every person at Isthmus, member and non-member alike.
the project when making suggestions or requests, or scheduling vacations or other personal
time. Once a Project Manager has been assigned, that person is responsible directly to his
or her fellow co-op members for getting the work done. The Operations Manager can serve
as a resource, or correct issues as necessary, but is not in a supervisory position over the
others. Rather than acting as ultimate authority or arbiter of resources, the Operations
Manager sees his role more as a facilitator of conversations, and as someone tasked with
making sure the teams have what they need to be successful. When asked how working at
Isthmus differs from other firms where he has worked, Operations Manager Jeff Yarwood
responded “It’s hugely different . . . there’s not just arbitrary goals that you’re trying to
achieve . . . what we’re trying to do is run a good business and have a happy cooperative
environment.”

Unlike in other firms, Project Managers at Isthmus are also not paid any extra for the effort,
or given any special leadership perks. Instead, people take on the role because they enjoy
it, are good at it, and see it as a way to make a contribution. Other members find other ways
to contribute. “We try and just let nature take its course for the most part” explained long-
term member Brian Mueller.

Some might say that such a diffused decision-making structure with all of its meetings and
shared information must necessarily be inefficient. As engineers, Isthmus members have
confronted this issue in a data-driven manner. In a study conducted several years ago, they
asked themselves that very question about workforce allocation. The study concluded that
the people hours devoted to board work balanced out to the equivalent of one full-time job
per year, while time spent doing committee work was another full-time equivalent. So
effectively, instead of hiring a General Manager and suite of department managers, the
cooperative instead has no overall CEO. There is an Operations Manager, Sales Manager
and Chief Financial Officer, and the business gets by very well with far fewer management-
level staff than a typical company in their industry would have. Far from being a drain on
resources, the democratic and participatory structure at Isthmus is at least cost-neutral, and
most likely much more efficient given the low level of staff turnover and high level of
employee satisfaction.

9 Interview with Jeff Yarwood, March 3, 2021.
“We have had plenty of discussions about the size of our Board” (which currently includes all 40 members) noted longtime member Ole Olson. While acknowledging some challenges including maintaining regular quorum and keeping every member engaged, he also said that “I am not sure that if we went down to a 10 person representative Board of Directors, it would be any different. . . . I think our Board of Directors functions better and more efficiently than most Boards regardless of size.”

Many Isthmus members are formally trained in project management, which helps them to effectively combine efficiency with a participatory culture. Other engineers might know how to coordinate elements and move a project along, but it is the cooperative structure which leads Isthmus leaders to look at these questions through a cooperative lens of worker engagement, responsibility and accountability. The results are so impressive that the co-op has been hired by customers—including one Fortune 500 company— to train the customers’ own engineers in Isthmus’s distinctive and democratic take on project management. One former customer was so impressed, he even joined the co-op and now serves as Operations Manager.

**Evolution and change**

As one of the Isthmus founders, John Kessler, notes in his original draft of the *Isthmus Owner’s Manual*, “The overriding rule of thumb that has guided policies at Isthmus since day one and continues to this day is a desire to be fair and equitable to all members. This means constant change, discussion, disagreement and compromise. That’s life at Isthmus”.

That sentiment captures very well the tension between continuity and change at Isthmus. Co-op membership is still open to all workers, and all worker-members serve on the board of directors. But the membership process has become more rigorous over the years. As the workforce increased rapidly in the 1990s, it became clear that some members lacked the level of commitment necessary to be an owner of a business whose success relied so heavily on quality and precision. Some difficult terminations ensued, and through a

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10 Personal communication, September 14, 2021.
painstaking process of engagement and self-evaluation, a more thoughtful membership system was put in place in the 2000s. The results of being more selective about who really is suited for membership at Isthmus have only served to strengthen the cooperative. “Now our business is just so much better than it was 20 years ago” observed Brian Mueller. “With just having that level of trust with all the people you’re working with around you... knowing you are in it for the same thing and the same goal.”

The co-op has also jettisoned its General Manager position in recent years, replacing that function with a combination of a Sales Manager (external focus) and Operations Manager who is responsible for all things inside the business. The 40-member Board of Directors, both on paper and in practice, remains the ultimate decision-maker and authority.

The cooperative has also refined their meeting process over the years, delegating more and more work to committees and confining information updates to prior-meeting communications in order to save precious board meeting time for final deliberations and decision-making. And their high caliber practice of precision project management came only after a period when feedback from customers was less than stellar in this regard. In both of these cases, improvements in the co-op’s practices came after members identified problems, and were empowered to go out and find information about how to solve them. Having a defined process for identifying bottlenecks, sourcing solutions, and then implementing and sharing results and best practices has created the conditions for incremental improvement and a forward-looking stance by the co-op’s members.

Fortunately for the co-op, their specialized industry expertise and reputation for quality have helped them remain resilient even in economic downturns; it has also shielded the co-op to a large degree from any outside industry pressures to conform to a more conventional business structure or practices. Customers may not quite grasp the cooperative nature of the company, but they understand good products.

Having a firm foundation in respect and cooperative principles is one element at Isthmus that made successful growth and change possible. Another is the foundational commitment to values – fairness and equity for workers, combined with a willingness to challenge and change anything else. “I have a tremendous amount of respect for John and Wendell and the group that originally started this” observed Yarwood. “They had the foresight to set up the structures so it would be successful and it has really blossomed.”
Looking ahead

Life at Isthmus is not without its challenges, both emerging and ongoing. Managing work flow, for example, is a constant test. Unlike other companies that may hire and fire scores of employees according to market demand, at a worker-owned cooperative like Isthmus it takes quite a bit of time to go through the hiring process. “We don’t want to hire people that don’t fit, because it just causes more problems” noted Operations Manager Yarwood. That means that the co-op has to be particularly attuned both to the needs of their current workforce, and to pending opportunities for growth.

Other stresses include the necessary generational change that come with being a company that has survived and thrived for 40 years. While one of the original founders still remains on staff, the co-op expects that up to a third of their members will retire over the next decade. Remaining members will be tasked with making sure that the cooperative culture endures in a changing market with a changing membership. Another issue that has provoked much thought and discussion is what to do regarding the considerable financial value that has been built up in the business over the years. There is no national law or practice in the U.S. regarding indivisible reserves as a way for cooperatives to safeguard intergenerational assets. Instead, each co-op is left on its own to try and determine what allocation of value is “fair” to past, present and future generations of members. Currently, the policy at Isthmus is that if the co-op were ever to disband, the value of the business would be distributed pro rata to all of the members who had worked at the cooperative for the past 20 years. But this solution is not seen to be a widely satisfactory one, and the cooperative members continue to ponder the issue.

Fortunately, the deliberative process of engagement and decision-making in place at Isthmus has prepared the cooperative well for meeting challenges of the future. While a conventional firm would be focused on quarterly or annual profits and payouts, Isthmus members feel empowered to make decisions for the long-term health of the company. Instead of focusing on short term results, members are encouraged to think and act in a different way: gathering information, musing about a problem, and then after some thought and reflection, perhaps saying to a group of peers: “Let’s look at what we would need to do to set ourselves up for success in the future” in such-and-such an area. And then they could set up a committee to do so.