



Patrick E. Murphy,  
CEO

Patrick Hughes,  
President

### **Togal Flagship Offering:**

The Easiest, Most Accurate automated construction estimating takeoff software for contractors of all sizes and sophistication.

### **Togal features:**

- Estimator time savings
- Takeoff accuracy
- Rapid takeoff analysis
- Sophisticated automated takeoffs without the need for BIM

### **Website:**

<https://togal.ai/>

### **Contact:**

[info@togal.ai](mailto:info@togal.ai)

## **Executive Summary**

Togal brings together the experience of a fourth generation construction management firm with top software developers and artificial intelligence (AI) talent to provide an easily adopted automated takeoff solution to contractors. By automating takeoffs, Togal addresses the laborious takeoff processes despite many existing digital tools. Existing digital tools either don't provide automation accuracy or require the use of complex 3D modeling. Togal allows contractors to leapfrog over those problems for reliable, fast, accurate takeoffs.

## **Togal Origins**

Named after the Gaelic word for "builder," Togal was founded after Patrick E. Murphy, CEO, a fourth generation general contractor, saw the need to merge leading-edge artificial intelligence (AI) and machine learning (ML) to revolutionize the estimating department at Coastal Construction Group and other companies. Knowing there had to be a better way, Murphy formed a team determined to create a solution enabling a more efficient and accurate process. More than a year later, Togal has developed a platform that can analyze plans up to 1,000 times faster than an experienced estimator, with greater accuracy and at a fraction of the cost.

## **Q&A with Togal's CEO, Patrick E. Murphy, and President, Patrick Hughes**

### **How did you draw up the blueprints for your business?**

**Patrick Murphy:** I grew up in a family business, Coastal Construction, which my dad started. We do about \$1 billion annually in construction in Florida. One of our biggest pieces of overhead and time components is our estimating or pre-construction department. Curious about ways to solve this and also interested in AI, I started digging and was fortunate to meet several people in the AI space to discuss the idea, and we realized that not only was it doable, but it was a great use of AI.

### **Why are there so many inefficiencies in the traditional bidding and estimating process?**

**Patrick Hughes:** When a development company is looking for a bid on a particular project, they would typically engage several GCs. To generate an initial estimate, the GCs would perform an area analysis on the plans and submit the initial bids to the developer. The developer would then narrow down the number of GCs and ask them to firm up their bids. The GCs would then send out the plans to the various subcontractors, who then perform their own area analysis in order to submit bids back to the GCs. You would think, well if the GC has done it already, why don't they just send the area analysis they have performed out to the subs? Unfortunately, that's not how the industry works, and mainly for legal reasons, since the subs want to verify the numbers for themselves. That means that those subs are relegated to going through the entire

estimation process again. You, therefore, have multiple layers of players performing this process. Some of the groups perform this estimation process manually, while others use expensive and outdated software in an attempt to quicken the process.

**Patrick Murphy:** The challenges don't end there either. If an architect changes the plans, he or she sends those revisions to the GC with some of the changes noted and circled in a cloud. Our machine learning and AI-driven algorithms solve these problems by not only doing the area analysis on the plans, but by also instantly identifying all changes. If you consider every layer within the construction process, and how many area analyses are done throughout the life of project, it's easy to see how Togonal can create massive efficiencies and time savings from the early stages of a project right through to completion. In addition, Togonal helps prevent omissions of any changes to the plans that weren't clouded through its version comparison tools.

## What makes your solution different from anything else that's available on the market right now?

**Patrick Hughes:** Depending on the project's complexity, an estimator can take several days to complete an area analysis or takeoff, but our solution can do it in a matter of seconds. Today, an estimator using any of the standard estimating software has to click a mouse button and drag over a space, room by room. This is a laborious, time-consuming process. Our technology allows estimators to focus on other higher-value services for their clients such as value engineering and scoping. By uploading plans of any file type or format, Togonal provides each room's dimensions, area and perimeter, including a "condition list" for various metrics of each space. This functionality provides the contractor with a remarkable pickup in efficiency and accuracy.

## What's next for Togonal?

**Patrick Murphy:** We're in the final stages of our Version 1 launch and feedback so far has been excellent. Thanks to our relationship with FMI, we had the opportunity to participate as a guest speaker and exhibitor at a large regional construction technology conference. All of the GCs and Subs who came to visit our booth (or who heard our presentation), said: "Holy cow, if this works, this is the most revolutionary software we've ever seen for Estimators." I am thrilled to say that all contractors, investors, and others that we've talked to about our AI-driven estimating tool have been eager to test it out. In an industry that's been slow to adopt new technologies, this one is going to be a real game-changer.

## Is COVID-19 impacting your company's plans?

**Patrick Murphy:** Despite the COVID-19 related business disruption, we actually think it's a great time to launch. Companies are looking to create efficiency in the business. They are looking for ways to improve the way departments operate while also offering more value to their clients. Construction, like most industries, has found new ways of doing more with less, so as the jobs begin to pick up, technologies like Togonal will enable companies to bid on more work more accurately and without necessarily increasing their overhead.

Index	Label	Area (SF)	Perimeter (LF)
1	Stair	304	79
2	Stair	331	89
3	BOH-AC	356	76
4	BOH-AC	154	51
5	BOH-AC	154	51
6	FOH	638	150
7	BOH-AC	96	46
8	BOH-AC	97	40
9	FOH	269	100
10	FOH	1060	352
11	BOH-AC	91	111
12	Office	17,239	1,002
-	-	-	-