



## 04 RESEARCH RESULTS

Evolution of Design Thinking enabled  
by emerging Startups



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## Evolution of Design Thinking enabled by emerging Startups

*Cabirio Cautela and Luca Gastaldi*

1.  
For the previous results of this research stream, see the report «Startups in the Design Thinking Ecosystem», available at [www.osservatori.net](http://www.osservatori.net)

2.  
[www.crunchbase.com](http://www.crunchbase.com)

If the analysis of companies in a sector provides a litmus test of their competitive dynamics, the study of startups active in the same sector often helps in understanding how these dynamics are likely to evolve over time.

For this reason, the Observatory continued with the effort initiated last year<sup>1</sup> of analyzing the ecosystem of international startups that could complement providers of Design Thinking solutions as well as support innovators that aim to implement the Design Thinking approaches. Given the flexible, creative, and lean approaches of these startups, they may constitute a significant driver of the field's development.

**The ecosystem of startups active in the field of Design Thinking is still immature**, especially compared to other fields, such as fintech, big data, or blockchain. However, several factors indicate that **a form of consolidation is emerging**, driven by new trends that will be looked at in-depth in the remainder of this chapter.

An extensive analysis conducted on Crunchbase<sup>2</sup> – the leading source of startup-related content – revealed 145 startups offering tools, solutions, and services that cover the phases of the various Design Thinking approaches described in Chapter 01.

As Figure 04.1 shows, almost all these startups were created in:

- **North America** (80 startups), with the United States continuing to show the highest number of Design Thinking startups (73 out of 145, equal to the 50% of the overall ecosystem);
- **Europe**: 40 startups, mostly in the United Kingdom (15) and Scandinavian countries (6; more precisely, 3 in Denmark and 3 in Sweden).

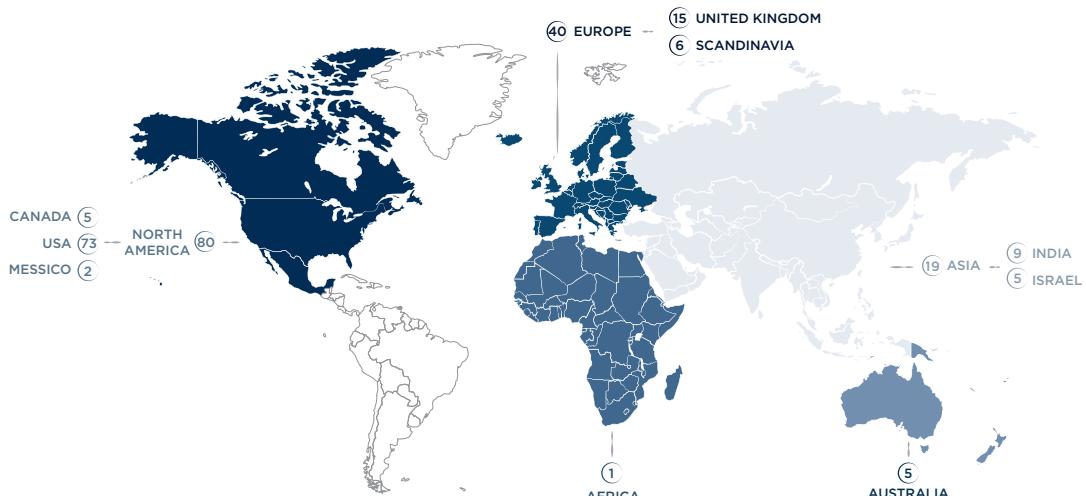


Figure 04.1 Geographic distribution of Design Thinking startups

These numbers are quite similar to those found last year<sup>1</sup>. However, we have also seen the increasing presence of Design Thinking startups in other continents. For instance, 19 startups have been created in Asia, mostly in India (9) and Israel (5), while Australia provided fertile terrain for the birth of 5 startups (2 of which founded in 2017). Interestingly, no startup has been launched in South America. Similarly, no startups in the field are Italian, testifying to the fact that:

- Design Thinking service providers in Italy must search internationally for potential partners through which to enhance their value propositions;
- Italian innovators have to look abroad for potential solutions through which to foster their Design Thinking initiatives.

Beyond this specific evidence, what emerges is that the **Design Thinking ecosystem is progressively becoming global**, and no longer centered on the geographic poles in which it was formed (United States) or sharpened (Europe).

San Francisco remains the city with the highest number of startups founded (16 out of 145). More generally, the overall area around Stanford University – where the concept of Design Thinking was initially developed – hosts most of the startups analyzed (26 out of 145; 16 in San Francisco, 5 in Menlo Park, and 4 in Palo Alto). New York and London are becoming new entrepreneurial aggregators of Design Thinking initiatives, with respectively 10 startups that have their headquarters in these cities.

As shown in Figure 04.2, the remainder of the chapter is organized in five sections as follows:

- Funding gathered by the startups in the Design Thinking ecosystem (§04.1);
- Organizational structure of these startups (§04.2);
- Design Thinking approaches supported by the startups (§04.3);
- Meta-phases supported by the startups (§04.4);
- Startups exploiting Artificial Intelligence (AI) to support Design Thinking (§04.5).

In each section, we will present some startups to provide concrete examples of interesting solutions that might be useful to adopt.

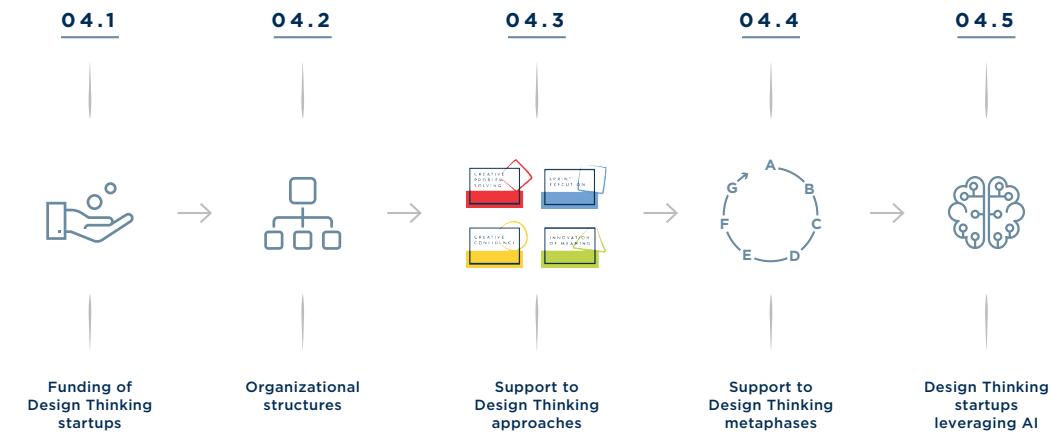


Figure 04.2 Organization of the chapter

#### 04.1 Funding of the Design Thinking startups

Overall, the 145 Design Thinking startups received 1,033 million dollars in funding, with an increase (+14%) compared to the amount registered last year (908 million dollars)<sup>3</sup>. To put this number into perspective, interesting to consider is that (Figure 04.3):

- The order of magnitude is one lower than all startups in the fintech industry (26 billion dollars)<sup>4</sup>;
- Startups active in the big data domain received five times the funding in the same timeframe (4.7 billion dollars)<sup>5</sup>;
- Startups active in the blockchain domain received six times the funding in the same timeframe (6.2 billion dollars)<sup>6</sup>.

Since the overall values are biased by the size of each domain in the ecosystem (730 fintech startups, 443 big data startups, and 633 blockchain startups), it is more appropriate to consider the average funding per startup.

As Figure 04.3 shows, **Design Thinking startups received, on average, 7.1 million dollars of funding**, slightly more than the value registered last year<sup>3</sup>. The amount is still:

- One fifth of the funding received by the average startup operating in the fintech industry (35 million of dollars);
- Lower than those received by big data (10.6 million dollars) and blockchain startups (9.8 million dollars).

**3.** See the report «Startups in the Design Thinking Ecosystem», available at [www.osservatori.net](http://www.osservatori.net)

**4.** According to the latest results of the Fintech and Insuretech Observatory

**5.** According to the latest results of the Big Data Analytics and BI Observatory

**6.** According to the latest results of the Blockchain Observatory

As Figure 04.4 shows, the average funding received by Design Thinking startups is highly biased by 9 startups, each of which gathered more than 40 million dollars of investments:

- **Canva**: A digital environment that facilitates graphic design by providing a drag-and-drop design tool, and a library of stock photos, graphic elements, and fonts that allow designers to easily and quickly visualize their ideas;
- **Playbuzz**: A platform that provides publishers and brands with interactive tools to craft engaging editorial and commercial content (for more information on this startup, see Box 04.3);
- **Veritone**: An AI-based platform that understands and transforms multiple forms of data to create actionable intelligence on products and services;
- **Pendo**: A digital solution that provides insights from product usage patterns and user sentiment with the final aim of making better product decisions during prototyping (for more information on this startup, see Box 04.2);
- **Amplitude**: Provides real-time, simple to use product analytics to help companies to better understand user behaviors and improve their engagement and retention;
- **Iguazio**: A continuous analytics platform offering data science as a service and simplifying the development and deployment of high-volume, real-time, data-driven applications;
- **Quip**: A platform that combines docs, spreadsheets, and communication tools to help Design Thinking teams get work done faster and smarter, building a culture of action;
- **Figma**: A collaborative solution to jointly design and prototype user interfaces, simplifying the process to handle feedback and updates within design teams;
- **Applitools**: An AI-powered solution that automatically tests, validates, and monitors all the visual aspects of any digital interface across every app, browser, operating system, and screen size (for more information on this startup, see Box 04.1).

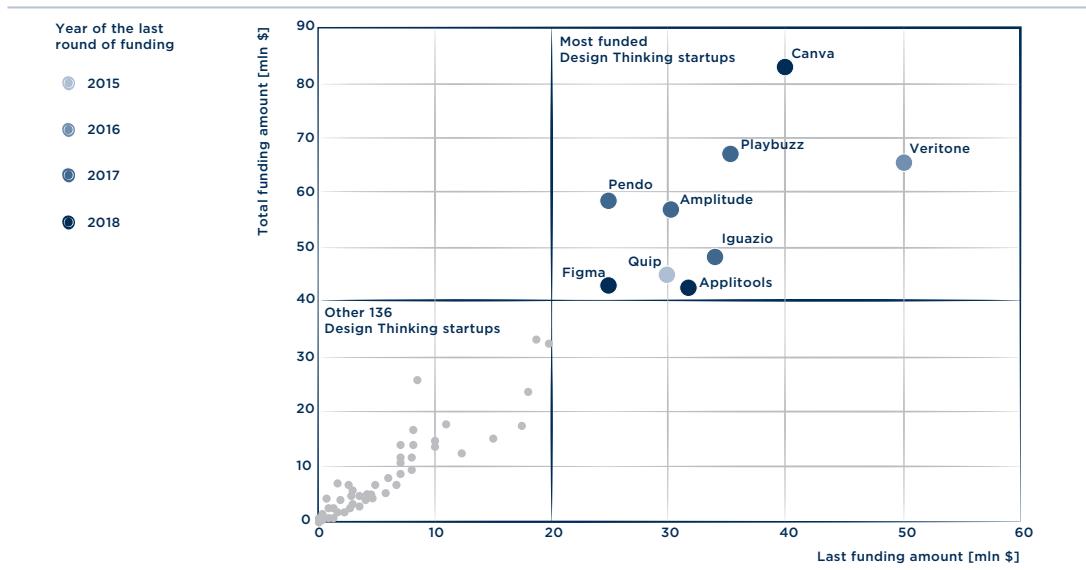


Figure 04.4 Most funded startups in the Design thinking ecosystem

**7.**  
See the report «Startups in the Design Thinking Ecosystem», available at [www.osservatori.net](http://www.osservatori.net)

Excluding these startups, the average funding per startup decreases to 3.5 million dollars, indicating an ecosystem that is still in a pre-paradigmatic stage compared to others. In any case, the presence of big rounds of investments in several core startups – almost absent in last year's analysis<sup>7</sup> – testifies to the progressive confidence of investors, not only in the development of the field, but also in its ability to produce returns in the medium term.

Indeed, as shown in Figure 04.4, the nine most funded Design Thinking startups received most of their funding in the last round of investments in either 2017 or 2018 in nearly all cases. More generally, as Figure 04.5 illustrates, the whole ecosystem shows **entrepreneurial vibrancy** in the last years. In fact, out of the 145 Design Thinking startups:

- 97 (67%) received their last investment since 2017;
- 44 (30%) received their last investment in 2018.

This means that – despite the current immaturity of the whole ecosystem – in the near future, we may see progressive consolidation and, hopefully, further investments and solutions.

Figure 04.5 also validates that the **barycenter of the ecosystem of Design Thinking startups is no longer exclusively in the United States or Europe**. In fact:

- 70% of the 23 Design Thinking startups that received funding in 2015 had their headquarters in North American countries (mostly the United States); this percentage decreased to 56% (14 out of 25) in 2016, 55% (29 out of 53) in 2017 and 48% (21 out of 44) in 2018;
- 23% (10 out of 44) of the Design Thinking startups that received funding in 2018 had their headquarters outside the United States and Europe; this percentage was below 5% (1 out of 23) in 2015;
- 18% (8 out of 44 and 9 out of 53) of the Design Thinking startups that received funding in 2017 and 2018 had their headquarters in Asia; this percentage was below 5% in 2015 (1 out of 23) and 2016 (1 out of 25).

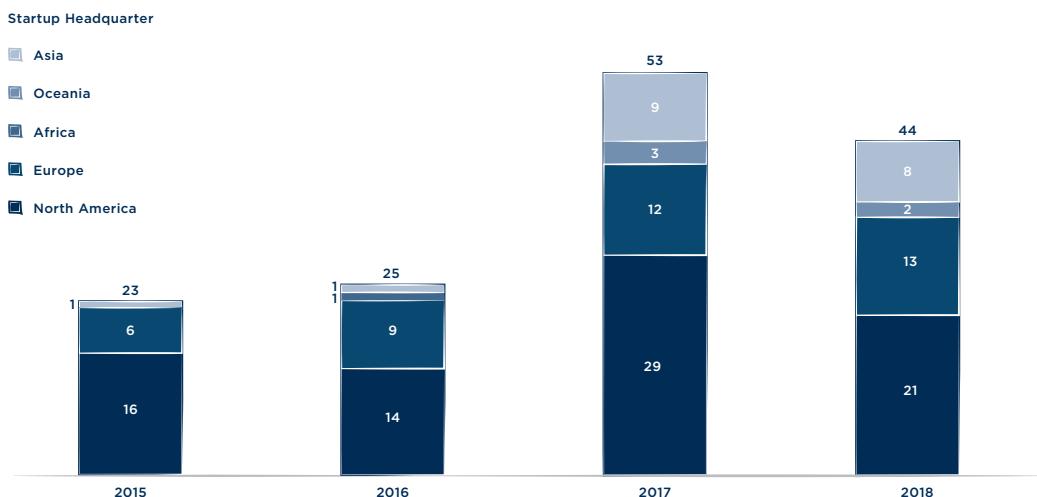


Figure 04.5 Last year of funding of the Design Thinking startups

**DESCRIPTION**

Applitools is an AI powered visual testing which automatically run visual tests at scale across every app, browser, OS, and screen size.

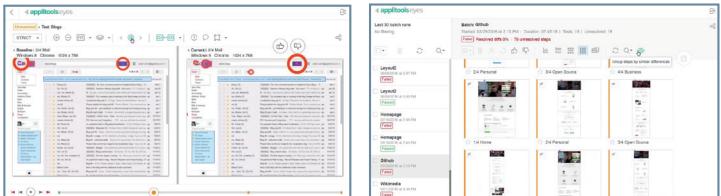


AI powered Visual Testing & Monitoring

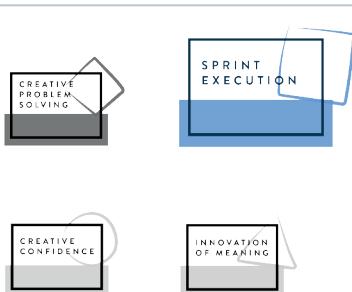
**OFFERING/SOLUTION**

```
[Test]
@members
public void TestResponsiveness()
{
    driver.Url = "https://github.com";
    var home = new Homepage(driver);
    eyes.CheckWindow(home.Name);
    var personalPage = home.GoToPersonalPage();
    eyes.CheckWindow();
    var openSourcePage = personalPage.GoToOpenSourcePage();
}

[tearDown]
@members
public void TearDown()
{
    driver.Quit();
}
```

**LOCATION**

Tel Aviv, Tel Aviv, Israel

**DESIGN THINKING APPROACH**

**Box 04.1** Description of Applitools startup

**INFO**

Year of Foundation: 1/1/2013



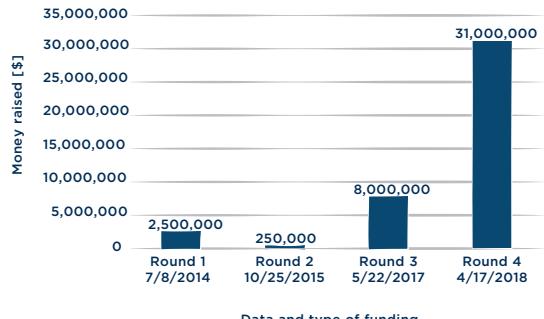
Number of Employees: 51-100



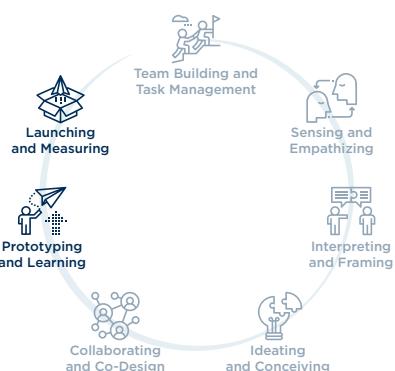
Number of Founders: 3



Website Address: <http://applitools.com>

**FUNDING**

Data and type of funding

**DESIGN THINKING METAPHASES**

#### 04.2 Organizational structure of Design Thinking startups

Figure 04.6 intersects startup funding with number of employees. First, interesting to note is that 19% of startups (27 out of 145) received more than 10 million dollars of investments, confirming a **progressive development of the whole ecosystem**. Importantly, the analysis of startup employees (see Figure 04.7) shows that out of the 145 Design Thinking startups:

- **64 have fewer than 10 employees.** This number corresponds to 44% of the whole ecosystem, a percentage that is exactly the same as registered last year<sup>8</sup>;
- **19 startups have a number of employees between 50 and 250.** This number corresponds to 13% of the whole ecosystem, a percentage that has almost doubled since the last survey<sup>8</sup>;
- **5 startups have a number of employees between 100 and 250.** This number corresponds to 3% of the whole ecosystem, a percentage that has almost tripled since the last survey<sup>8</sup>. Pendo, described in Box 04.2, is an example of these startups that are highly consolidated from an organizational perspective;
- **No startup in the ecosystem has more than 250 employees.**

<sup>8</sup> See the report «Startups in the Design Thinking Ecosystem», available at [www.osservatori.net](http://www.osservatori.net)

If the overall ecosystem is still immature in structure, the related startups seem to progressively rely on consolidated organizational structures. This is likely related to the multidisciplinarity required by Design Thinking endeavors, as confirmed by an analysis of the curricula of startup funders. Out of the 145 startups in the Design Thinking ecosystem:

- Only 51 (35%) have a single funder, mostly with an information science background;
- 94 (65%) have at least 2 funders; in most cases, one with an information science and the other with a design background;
- 14 startups (10%) have more than 4 funders with a mixture of expertise in information science, design, and business.



Figure 04.6 Last year of funding of the Design Thinking startups

As further evidence of the progressive consolidation of the ecosystem from an organizational perspective, interesting to highlight is that 16 startups deliberately use Design Thinking terminology to convey their value proposition. In last year's survey<sup>8</sup>, this number was equal to 6, showing the **increasing pervasiveness of Design Thinking also in the entrepreneurial sphere**.

Interestingly, 7 of these 16 startups do not offer a product, an app, or more generally, a digital artefact supporting and/or enhancing a specific Design Thinking phase. Instead, they configure themselves as **providers of generic Design Thinking services**. The startups are the following:

- **Lollypop**: An Indian UX/UI design agency specialized in the development of web, mobile, wearables, and Internet of Things (IoT) platforms;
- **Quantion**: A Spanish digital factory providing end-to-end digital transformation services;
- **Cosmic Info Ventures**: An Indian studio that builds cross-platform digital experiences, brand strategies, and automated enterprise processes;
- **Rokk3r**: A digital studio headquartered in Miami that specializes in blockchain, AI, IoT, and big data with an emphasis on the fintech sector;
- **Differential**: A digital boutique from Cincinnati providing software development and design consultancy for middle-market or enterprise level organizations;
- **DevOpsGroup**: A Cardiff-based consultancy focused on digital transformation in both the public and private sectors, with a main emphasis on the United Kingdom;
- **Innovation360**: A Swedish agency supporting organizations in establishing an adaptable innovation process and fostering a culture of innovation.

These startups are generally small in terms of both number of employees and funding: only Rokk3r has more than 50 employees, and, all together, the 7 startups received only 11 million dollars of funding (5 of which went to Rokk3r).

Despite these small numbers, it seems that **investors have started financing the creation of new service providers of Design Thinking solutions** that complement existing ones or increase the level of competition in the field.

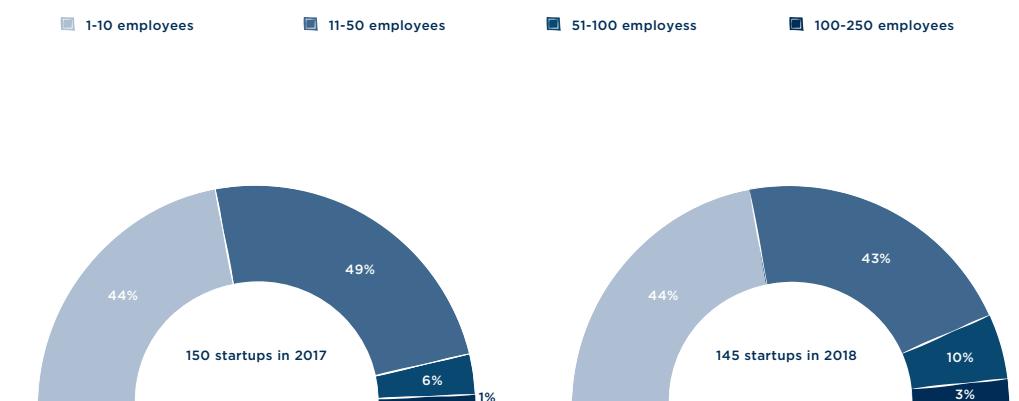
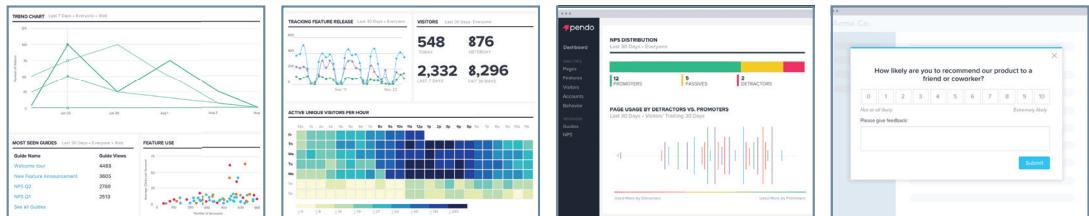
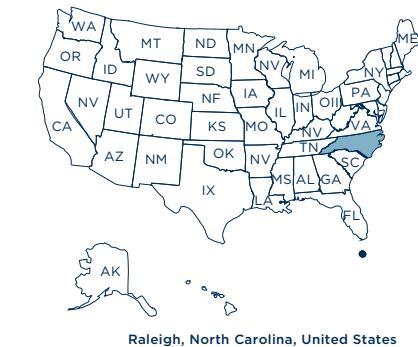
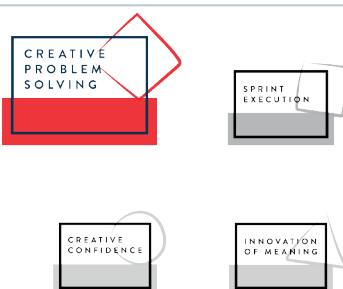


Figure 04.7 Evolution of the employees of the Design Thinking startups

**DESCRIPTION**

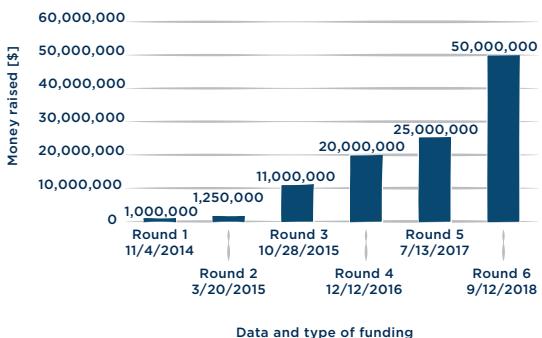
Pendo is a platform that helps in building, delivering and maintaining products that customer love by capturing their experiences and analyzing their satisfaction through analytics.

**OFFERING/SOLUTION****LOCATION****DESIGN THINKING APPROACH**

Box 04.2 Description of Pendo startup

**INFO**

- Year of Foundation:** 1/10/2013
- Number of Employees:** 101-250
- Number of Founders:** 4
- Website Address:** <http://www.pendo.io>

**FUNDING****DESIGN THINKING METAPHASES**

### 04.3 Support to Design Thinking approaches

As Figure 04.8 shows, out of the total 145 startups analyzed:

- 41 offer solutions related to the **Creative Problem Solving** approach;
- 41 offer solutions related to the **Sprint Execution** approach;
- 50 offer solutions related to the **Creative Confidence** approach;
- 13 offer solutions related to the **Innovation of Meaning** approach.

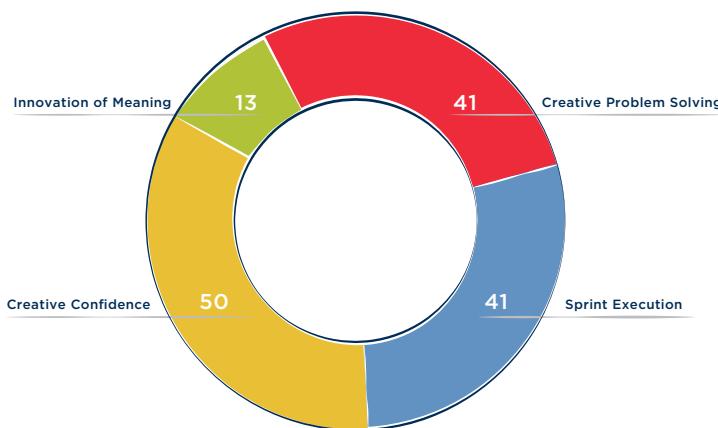
The dispersion of data around the different approaches highlights a **fermentation phase**, where there is no evidence of one specific way of applying and delivering Design Thinking. These results are similar to, and thus confirm, those registered last year<sup>9</sup>.

Even if relating to the origin and first cultural roots of Design Thinking, the **Creative Problem Solving** approach does not constitute the biggest cluster of startups.

This is symptomatic of the fact that Design Thinking – as a managerial phenomenon – in less than 20 years, has rapidly evolved according to different streams. Design Thinking, as the figures show, assumes a first form of contextualization when operating in a digital environment: here the weight of fast digital services execution and interfaces reflects the old original Design Thinking approach – stressing the activities of building, learning, and iterating in the **Sprint Execution** approach. On the other hand, the consistent number (almost half the sample) of solutions applied to the organizational context (**Creative Confidence**) shows that Design Thinking has made a sort of leap in scale: born as an innovation approach dealing with a product domain (then evolving towards services and digital apps), it seems to have scaled up to an organizational level. This means that many new ventures see in Design Thinking the potential to change the innovation culture in organizations rather than simply addressing single product innovation issues. Lastly, a small but emerging trend shows that Design Thinking is applied to the strategic vision (**Innovation of Meaning**). Here, solutions relate to challenging the “reason to buy” or the reason why people love (or hate) the specific “meanings” and cultural messages attached to products and services.

9.

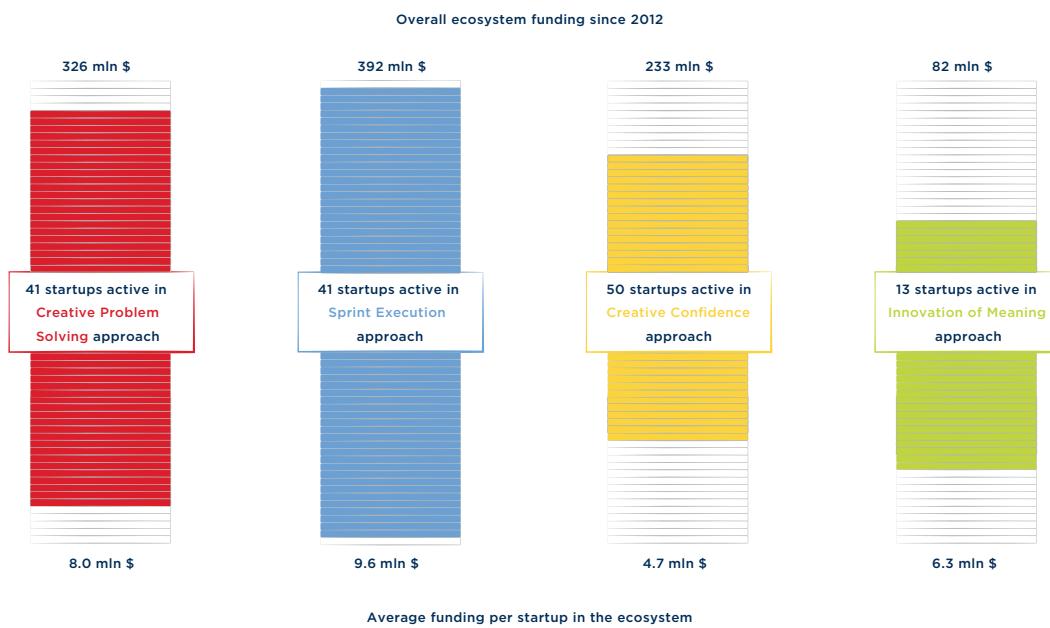
See the report «Startups in the Design Thinking Ecosystem», available at [www.osservatori.net](http://www.osservatori.net)



**Figure 04.8** Distribution of startups on the four Design Thinking approaches

Interesting to consider is not only the number of startups for each Design Thinking approach, but also the distribution of funding among them. As highlighted in Figure 04.9:

- **Startups supporting Sprint Execution received most of the funding:** both comprehensively (329 out of the 1,033 million dollars characterizing the overall value of the ecosystem), and on average (9.6 million dollars per startup). Applitools, described in Box 04.1, is an interesting example of these startups.
- **Creative Problem Solving continues to gather a great deal of funding:** the 41 startups in the ecosystem supporting this Design Thinking approach gathered 326 million dollars, which correspond to an average 8 million dollars per startup. An example of these startups is Pendo, presented in Box 04.2.
- **Creative Confidence is the approach with the least funding per startup:** while the overall funding is equal to 233 million dollars, on average, each startup received only 4.7 million dollars. GainX exploits Artificial Intelligence to lead data-driven enterprise transformations and change programs, as illustrated in detail in Box 04.3.
- **The few startups supporting Innovation of Meaning received interesting funding:** even if overall the 13 startups supporting this Design Thinking approach received the smallest amount of investments (82 million dollars), on average, each collected 6.3 million dollars. PlayBuzz, depicted in Box 04.4, is an example of a storytelling platform to create, distribute, and monetize interactive stories driving audience engagement, conveying new meanings, and analytically measuring their success.



**Figure 04.9** Funding per Design Thinking approach

**DESCRIPTION**

GainX uses Artificial Intelligence, Advanced Organizational Design Theory and Social Network Analytics to deliver deep, accurate and unprecedented insights for their customers.

**INFO**

Year of Foundation: 1/1/2012



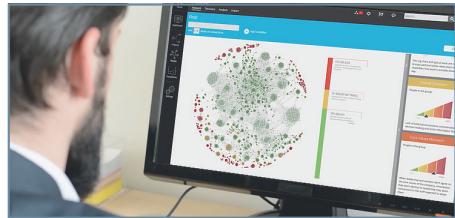
Number of Employees: 11-50



Number of Founders: 1



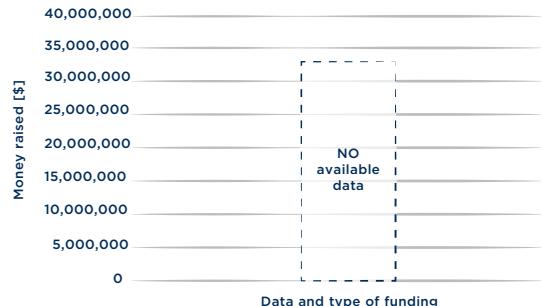
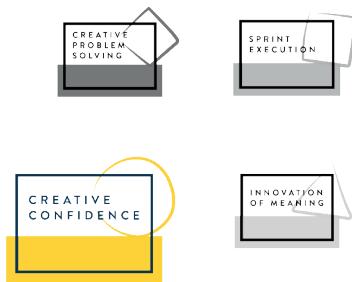
Website Address: <http://www.gainx.com>

**OFFERING/SOLUTION****LOCATION**

Waterloo, Ontario, Canada

**FUNDING**

Money Raised Currency (in USD): NO AVAILABLE DATA

**DESIGN THINKING APPROACH**

Box 04.3 Description of GainX startup

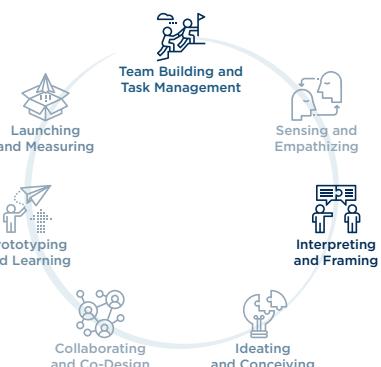
**DESIGN THINKING METAPHASES**

Figure 04.10 classifies the startups based on number of employees. As shown:

- Most of the startups with fewer than 10 employees focus on **Creative Problem Solving** and **Creative Confidence**. These seem to be the approaches that capture most interest from brand new startups, likely due to the fact that these approaches are, on the one hand, quite established and well known (**Creative Problem Solving**), on the other hand, highly necessary in modern organizations (**Creative Confidence**).
- The startups that are somewhat more structured from an organizational viewpoint (from 11 to 50 employees) tend to focus on **Sprint Execution** and **Creative Confidence**, emphasizing that these are probably the approaches that allow gaining momentum and growth in the current business scenario characterized by many digital experiences to be reimagined in very short timeframes, and enabling employees to become energized and engage in digital transformation projects.
- Most of the startups with 100 to 250 employees support **Creative Problem Solving**, testifying to the fact that the traditional approaches to Design Thinking continue to dominate in more structured entrepreneurial endeavors; this results will likely change in the near future.

When considering all the results (number of startups, employees, organization) of the various approaches in an overall perspective, what emerges is that **the ecosystem of startups is slowly moving from the traditional approaches to Design Thinking to progressively embracing new (but not necessary alternative) ways of providing Design Thinking, mostly focused on efficient and effective service design and democratization of the innovation efforts.**

Interestingly, no startup supports true criticism, showing a gap that will likely be filled through a progressive diffusion of the Innovation of Meaning approach. Most of the startups support this approach by simplifying the positioning and diffusion of new meaning. As an example, consider PlayBuzz, described in Box 04.4.

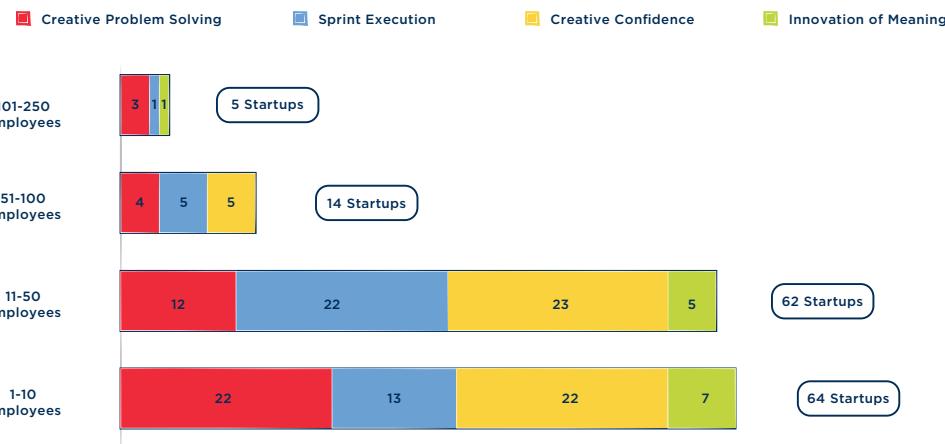


Figure 04.10 Distribution of the 145 startups subdivided by the various Design Thinking approaches

**DESCRIPTION**

Playbuzz is storytelling platform that provides publishers and brands with interactive tools to craft engaging editorial and commercial content.

**INFO**

Year of Foundation: 7/7/2012



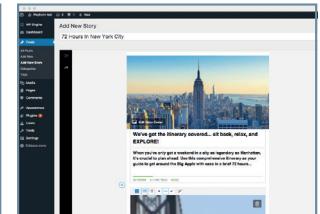
Number of Employees: 101-250



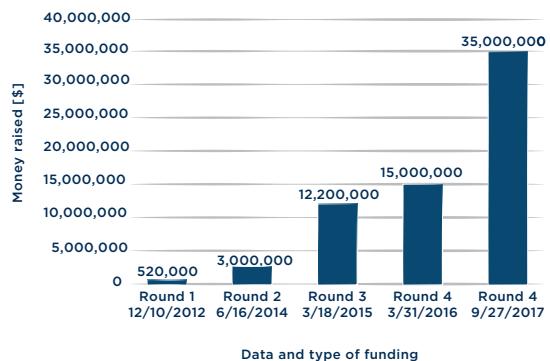
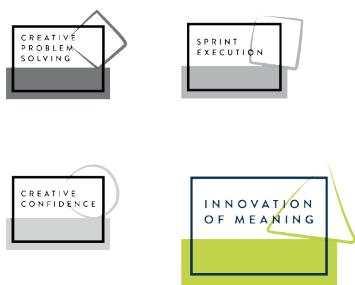
Number of Founders: 2



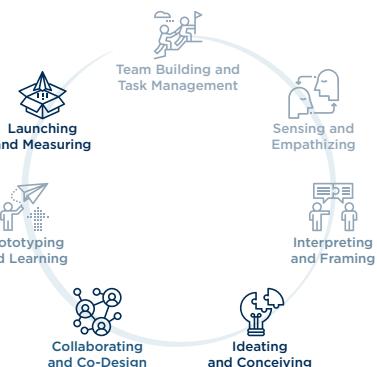
Website Address: <http://www.playbuzz.com>

**OFFERING/SOLUTION****LOCATION**

New York City, New York, United States

**FUNDING****DESIGN THINKING APPROACH**

**Box 04.4** Description of Playbuzz startup

**DESIGN THINKING METAPHASES**

#### 04.4 Support to Design Thinking metaphases

The ecosystem of startups has also been clustered according to some “metaphases” that can be considered common to the different Design Thinking approaches. This enables, on one hand, better grasping which elements of Design Thinking startups and investors mainly consider, and on the other hand, providing a picture of the metaphases that remain less considered due to the intrinsic features of the specific metaphase itself or the existence of a wide offering already provided by incumbents.

The metaphases used to represent this picture are the following:

- **Sensing and empathizing:** where discovery and exploratory research activities are aimed at gaining greater confidence and empathy with users and the “problem context” itself;
- **Interpreting and framing:** where design thinkers are pushed to frame the design challenges and problems, tackling them from different promising perspectives, and challenging the dominant views;
- **Team building and task management:** where teams are formed, and collective and individual tasks are attributed according to cultural diversity and cross-disciplinary principles;
- **Ideating and conceiving:** where design thinkers propose novel solution areas;
- **Collaborating and co-designing:** where the solution areas are developed in detail with individual and teamwork contributions;
- **Prototyping and learning:** where solutions materialize, and learning points are reached through testing activities.;
- **Launching and measuring:** where beta-solutions are placed in experimental marketplaces or user labs to assess first-hand impressions.

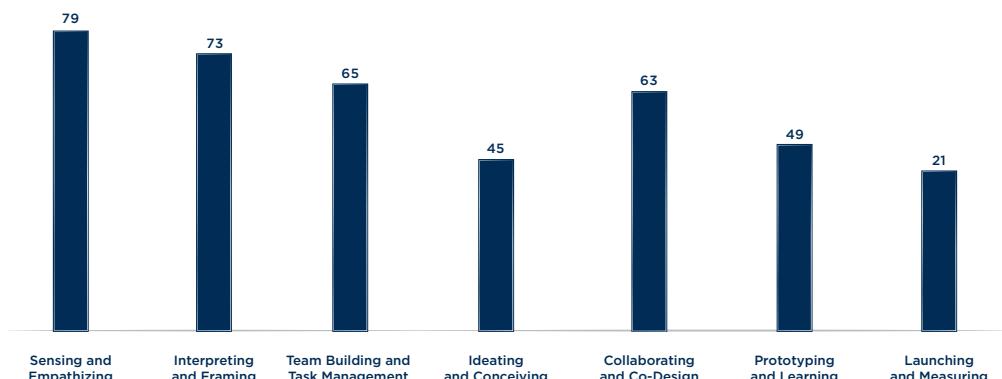


Figure 04.11 Distributions of startups on the various Design Thinking metaphases

As shown in Figure 04.11, the ecosystem of startups concentrates on “sensing and empathizing” and “interpreting and framing”, generally considered key activities in all Design Thinking approaches. Many startups support the metaphase of “team building and task management”, even if this is a wide area that is not strictly linked to Design Thinking, thus including wider project management services and tools with or without specific design nuances. An interesting example from this viewpoint is Simpplr, described in Box 04.5.

Going more in depth and intersecting the metaphases with the four Design Thinking approaches, Figure 04.12 shows:

- In the “sensing and empathizing” metaphase, the majority of startups relate to the **Creative Problem Solving** and **Creative Confidence** approaches, with slightly fewer relating to the **Sprint Execution** approach;
- A relevant number of startups support the “interpreting and framing” metaphase; these startups offer services and tools mostly centered on the **Creative Problem Solving** and **Creative Confidence** approaches;
- A relevant group of startups offers services and tools related to the “collaboration and co-design” metaphase where most relate to the **Creative Confidence** approach; indeed, the activities related to collaboration and employee engagement constitute a key activity pertaining to this approach;
- Fewer startups instead cover the “ideating and conceiving”, “prototyping and learning”, and “launching and measuring” metaphases; there are no specific reasons for this, some – such as “prototyping and learning” and “launching and measuring” – seem to be consolidated and offered by many incumbents; others, such as “ideating and conceiving”, seem to be context-dependent and difficult to fully outsource.

B12, described in Box 04.6, is an interesting example of a startup exploiting Artificial Intelligence to create highly responsive websites in a very short timeframe, which are then refined by design experts and regularly assessed and improved to attract more visitors.

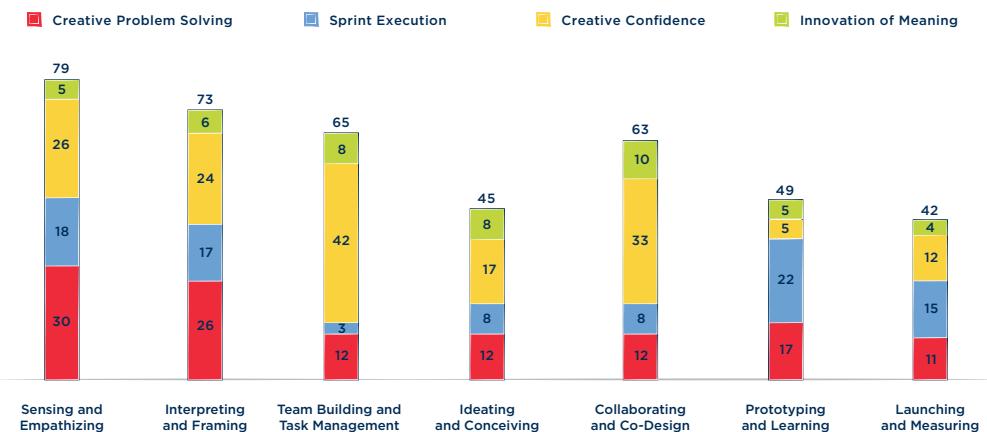
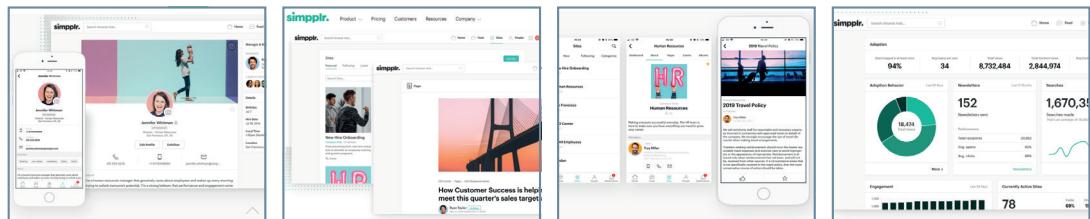
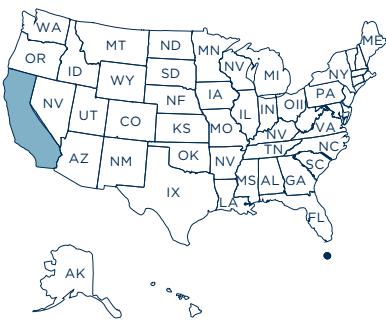


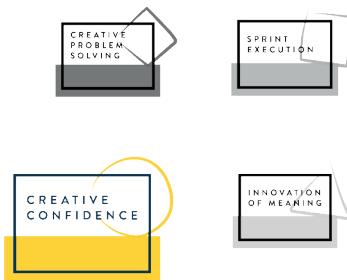
Figure 04.12 Distribution of startups on the various Design Thinking metaphases

**DESCRIPTION**

Simpplr is the modern employee intranet that helps companies connect, align, and engage their entire workforce across the enterprise.

**OFFERING/SOLUTION****LOCATION**

Redwood City, California, United States

**DESIGN THINKING APPROACH**

Box 04.5 Description of Simpplr startup

**INFO**

Year of Foundation: 7/15/2017



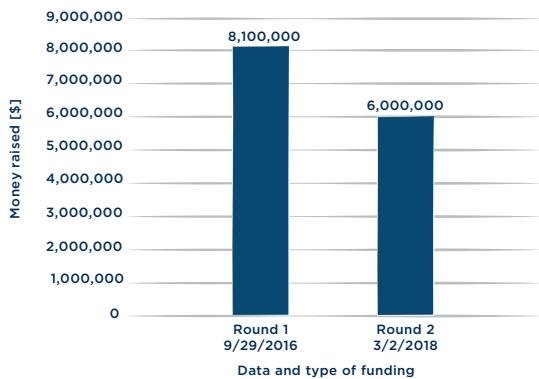
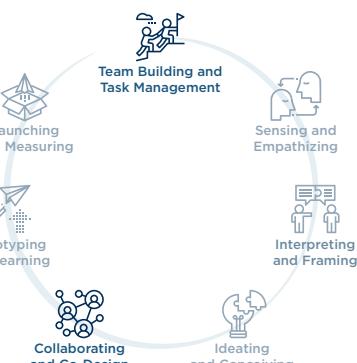
Number of Employees: 51-100



Number of Founders: 2



Website Address: <http://www.simpplr.com>

**FUNDING****DESIGN THINKING METAPHASES**

**DESCRIPTION**

B12 offers a human-assisted A.I. approach to build, manage and optimize beautiful and professional websites.

**INFO**

Year of Foundation: 1/1/2015



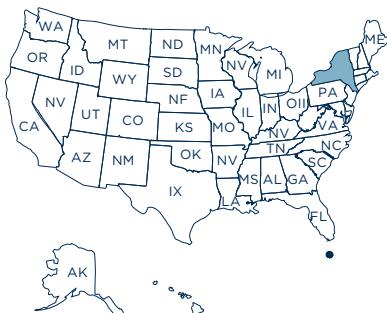
Number of Employees: 11-50



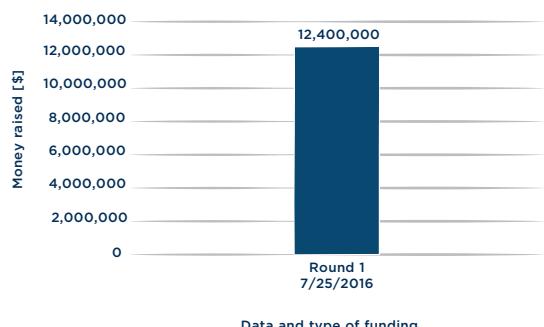
Number of Founders: 2



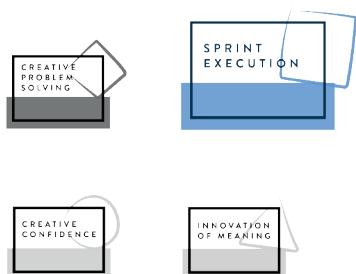
Website Address: <http://www.b12.io>

**OFFERING/SOLUTION****LOCATION**

New York City, New York, United States

**FUNDING**

Data and type of funding

**DESIGN THINKING APPROACH**

Box 04.6 Description of B12 startup

**DESIGN THINKING METAPHASES**

#### 04.5 Design Thinking startups leveraging Artificial Intelligence

66 of the 145 startups related to the Design Thinking ecosystem leverage **Artificial Intelligence** (AI) in their offering and attracted **418 million dollars** of funding. This data leads to a different reasoning on the evolutionary paths of Design Thinking. In fact, AI can serve Design Thinking processes in different ways, for instance:

- Combining different channels during data collection;
- Constructing a framework linking some data;
- Assisting user research, compressing and accelerating some time-consuming activities;
- Supporting prototyping and testing, providing data-based interpretations of the collected data.

Moreover, the data on size confirm that, as in the overall ecosystem, these startups are not in the seeding or early stages. Indeed, out of the 66 AI-based startups in the Design Thinking ecosystem:

- 25 count 1-10 employees;
- 31 count 11-50 employees;
- 9 count 51-100 employees;
- 1 has between 101 and 250 employees.

Furthermore, the startups leveraging AI have been clustered according to the above-mentioned metaphases. As shown in Figure 04.12, AI-based startups are mostly concentrated in the same three metaphases of the remainder of the Design Thinking ecosystem: “sensing and empathizing”, “interpreting and framing”, “team building and task management”. Moreover, the Design Thinking approach to which they mainly refer is **Creative Confidence**.

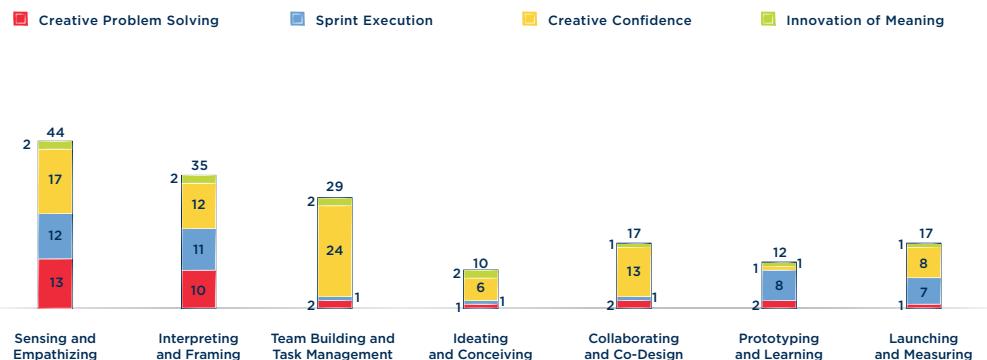


Figure 04.13 Distribution of AI-based startups on the various Design Thinking metaphases

**DESCRIPTION**

Eyesover uses machine learning to discover trends as they are developing and tell you if those trends are impacting your customer or support base.

**EYESOVER****INFO**

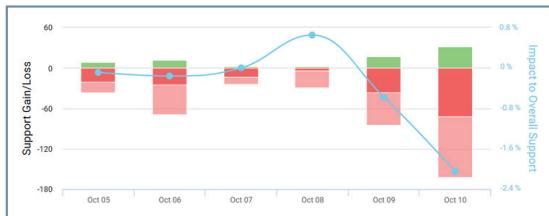
Year of Foundation: 7/15/2017



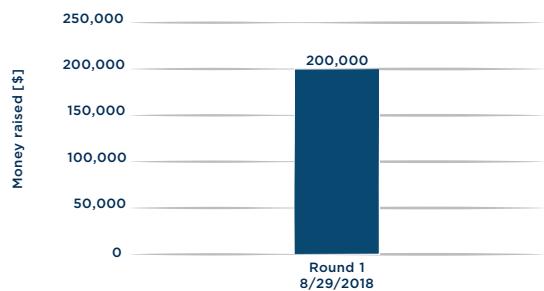
Number of Employees: 1-10



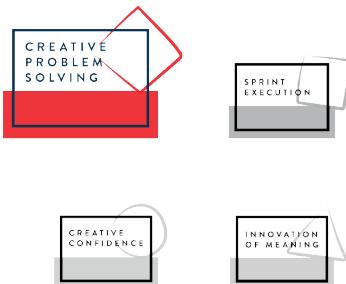
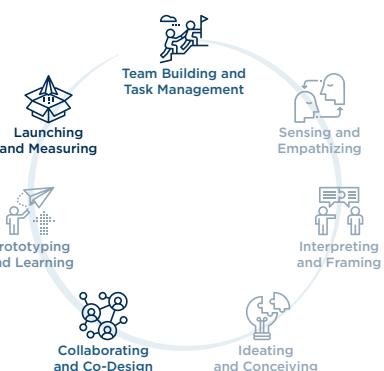
Number of Founders: 2

Website Address: <https://www.up-ai.com>**OFFERING/SOLUTION****LOCATION**

Fredericton, New Brunswick, Canada

**FUNDING**

Data and type of funding

**DESIGN THINKING APPROACH****DESIGN THINKING METAPHASES**

Box 04.7 Description of Eyesover startup

AI finds fertile terrain in “sensing and empathizing”, as it helps search for and integrate different sources of data and organizing these according to some specific criteria, as described in Box 04.7 regarding EyesOver. This evidently helps increase empathy with the problem-context, reducing effort and time. On the other hand, AI is also leveraged – as one might expect – in “interpreting and framing” where it provides different evidence connecting “dots” and data, offering a specific view of the problem-context as described in Box 04.8 featuring UpYourGame. In “team building and task management” instead, AI intervenes to create – given some profiles and backgrounds – the “right mix” of competences and abilities that each Design Thinking team should have.

The use of AI in the other metaphases is instead less pronounced. In “ideating”, AI does not seem to substitute the human contribution, confirming – at the current state – that AI remains mainly in the field of analytics and intelligence. A certain level of use relates to “collaborating and co-designing”, where AI enables data sharing, decision-making support, info alignment among the team members. In an alternative vein, AI supports “prototyping and learning” activities – mainly referring to the **Sprint Execution** approach – where it offers cues for prototyping, and serves as a data collection and mining tool in testing phases.

**DESCRIPTION**

Up Your Game redefines performance management with real time performance tracking, sentiment analytics, machine learning algorithms and data-driven insights.

**INFO**

Year of Foundation: 07/15/2017



Number of Employees: 51-100



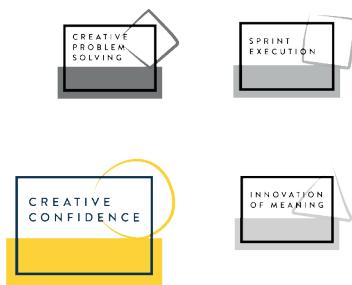
Number of Founders: 2



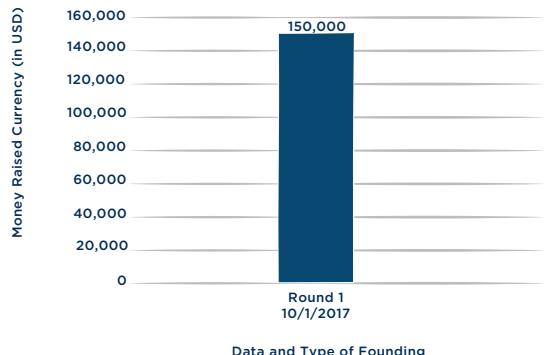
Website Address: <http://www.simpplr.com/>

**OFFERING/SOLUTION****LOCATION**

Dubai, Dubai, United Arab Emirates

**DESIGN THINKING APPROACH**

Box 04.8 Description of Up YourGame startup

**FUNDING****DESIGN THINKING METAPHASES**