The increasing number of students with learning disabilities enrolling in postsecondary education presents both a challenge and an opportunity to the postsecondary and college success communities. NorthBridge College Success Program has been working to improve the postsecondary experience and success rates for students with learning disabilities in Maricopa County since 2011. Providing greater availability of college support services for students with learning disabilities will lead to greater retention and completion rates. This white paper highlights the need, presents solutions, and illustrates the opportunity to dramatically increase college completion rates of this underserved and struggling, potentially successful, population of students. With purposeful collaboration the postsecondary, business and philanthropic sectors can make the difference.

The Need

More than one in ten Arizona public high school students have disabilities and one-third remain unengaged in work or education after graduation, many for multiple years (McFadden, 2015). This group of the unengaged are called “opportunity youth”. Maricopa County has one of the highest percentages of opportunity youth in the nation (Burd-Sharps & Lewis, 2014). Over 85% of the opportunity youth with disabilities have learning disabilities, but they are a population of great promise. They are often highly intelligent and creative
It is essential to understand that LD students require different support and resources to succeed. The term learning disabilities refers to disabilities such as ADHD, Autism, Dyslexia, and other processing challenges. Acknowledging that this population needs additional support and resources will improve postsecondary education success rates by shaping future policies and actions. The LD postsecondary completion rate of 27% is dwarfed by the national average of 59% (Wagner & Newman, 2015). Using the Arizona Department of Education’s research and data tools, NorthBridge has calculated that approximately 2,000 students with learning disabilities graduate high school in Maricopa County each year. If less than 35% are enrolling in postsecondary institutions, and only 27% of those who enroll earn a degree or certificate, this means that fewer than 200 of these students (less than 10%) will have the knowledge and skills to compete for the jobs of 2020 and beyond.

It is reported that 35% of leading entrepreneurs have a learning disability (Logan, 2009), conversely, they also make up 45% of our prison population (Barnard-Brak & Sulak, 2010). Unfortunately, learning disabled (LD) students are not experiencing much college success. As the increasing majority of jobs require postsecondary certificates and degrees, helping LD students succeed in college is essential to addressing the degree completion crisis and increase college completion rates.

The lack of postsecondary success for students with learning disabilities is primarily driven by two factors:

1. Many students with learning disabilities are not enrolling in postsecondary education when they are capable.
2. Those who do enroll find a system unprepared to meet their needs.

"I suffer from PTSD and Fibromyalgia, and have a hard time memorizing things. I now use memory aids and techniques I learned from the NorthBridge tutors and I’m a better student than I was a year ago. If I didn’t have all the support of the NorthBridge tutors I wouldn’t be able to continue my education."

NorthBridge Student, GCC

Enrollment Discrepancy

Upon graduation from high school, less than 35% of LD students in Maricopa County (approximately 2,000 graduate each year) enroll in postsecondary education, and only 10% complete at least one year’s worth of college credit within two years of enrollment (Arizona Department of Education, 2017). These statistics are in stark contrast with the enrollment and year-one success rates of all other demographic cohorts. Currently, 52% of high school graduates enroll in postsecondary education (Expect More Arizona, 2017) and approximately 35% complete one year of coursework within two years (ADE, 2017).

While the lower enrollment rate can be explained in part by the fact that a certain percentage of these students have more significant disabilities, it does not account for a difference of 17%. A significant factor leading to low enrollment are the expectations, or lack thereof, of parents, teachers and other professionals who help form, and guide, the post-high school decisions of students with learning disabilities. The Morrison Institute’s 2015 report, The Graduation Cliff, found that 88% of LD students thought they could earn a 2 or 4-year degree, but only 61% of the adults who guided them shared their optimism (McFadden, 2015). The report also concluded that the “intervention of government agencies has a negative effect on student outlook, regardless of disability.” Thus, neither parents or educational leaders are presenting college as a viable option for enough of these students. Without encouragement, too many of these students wrongfully conclude that they cannot succeed in postsecondary education and they do not try.

Support Needed for LD Students

It is essential to understand that LD students require different support and resources to succeed. The term learning disabilities refers to disabilities such as ADHD, Autism, Dyslexia, and other processing challenges. Acknowledging that this population needs additional support and resources will improve postsecondary education success rates by shaping future policies and actions. The LD postsecondary completion rate of 27% is dwarfed by the national average of 59% (Wagner & Newman, 2015). Using the Arizona Department of Education's research and data tools, NorthBridge has calculated that approximately 2,000 students with learning disabilities graduate high school in Maricopa County each year. If less than 35% are enrolling in postsecondary institutions, and only 27% of those who enroll earn a degree or certificate, this means that fewer than 200 of these students (less than 10%) will have the knowledge and skills to compete for the jobs of 2020 and beyond.
In many ways, Maricopa County is an educational oasis of resources and innovation. Arizona State University, the Maricopa County Community College District (MCCCD), and Grand Canyon University are all national models of higher education. All are the largest institutions of their kind, and all have been recognized for their innovations and educational excellence. However, none have specific outreach or institution-wide success programming beyond what is required by Title III of the Americans with Disability Act (1990), to help students with learning disabilities succeed. By contrast, programs like the Strategic Alternative Learning Techniques (SALT) program at the University of Arizona or the Learning Effectiveness Program (LEP) at the University of Denver, provide the additional level of supportive services and programs needed for LD students to succeed.

Disability Resources & Services departments (DRS) are not enough. They help LD students when it comes to logistical concerns and accommodations, but do not provide the full supportive service structure needed like those provided by SALT, LEP and NorthBridge. In accordance with the ADA, DRS provides accommodations for students with disabilities to ensure equal access to their campuses, to information, and to instruction. Common accommodations are text to speech software, note takers, alternative testing locations, and extended time for tests. While these resources are extremely important, they often do not meet the needs of LD students (Grasgreen, 2014). In 2015-16 and 2016-17, over 2,700 and 3,600 students registered with the DRS offices of MCCCD, and their average GPA was 1.88 and 2.15. Over the last 6 years, NorthBridge programming, which aligns with national best practices for supporting LD students, has demonstrated that additional services, such as student-centered advising, executive functioning coaching, and individualized tutoring dramatically improve indicators of success like GPA for this population.

In the Fall of 2015, the Ellis Center for Educational Excellence funded NorthBridge pilot programs at Glendale and Paradise Valley Community Colleges to determine if campus-based NorthBridge programming could improve academic outcomes for DRS registered students. The Ellis Center asked NorthBridge to report its findings of the pilot programs and to particularly address if there were any systemic barriers to college success for LD students and, if so, how to overcome them. This whitepaper incorporates the outcomes from the pilot programs and a review of national best practices to develop a set of recommendations to overcoming the barriers to success for LD students in postsecondary education.

### Current Support Systems

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### Solutions

Improving postsecondary outcomes for LD students is an achievable goal. The following four programmatic recommendations will lead to increased enrollment of LD students, a significantly higher rate of degree completion, and position MCCCD to become a national model for other institutions and communities to follow.

1. **Increased use of Accommodations**

LD students can receive accommodations through DRS to allow them to access, understand, and or demonstrate comprehension or mastery of content/coursework, if the DRS professionals deem the accommodation to be necessary. To receive accommodations students must show proof of their disability and articulate how certain accommodations may help them to demonstrate mastery of the course content. Accommodations never alter the content, complexity, or amount of work required to pass a course, but have a huge impact on the success of LD students. Unfortunately, only 17% of college students who qualify for accommodations request them (Eden, 2017). There are many reasons why LD students don’t seek accommodations. Some are unaware of the availability of these services. Some want to do it on their own. Others are apprehensive about self-disclosing their disability, and some do not have the necessary documentation to prove their disability (testing can be expensive).

Academic outcomes and postsecondary enrollment rates will improve as communication between the DRS offices, high school counselors, transition coordinators, the LD students and their parents improve prior to enrollment. Too few students know about the DRS offices, and the messaging to these...
students also needs to be modified, because “wanting to do it on your own” or being hesitant to self-disclose one’s disability is counterproductive to success in college. Additionally, scholarship funds are needed to help low-income students obtain the documentation needed to secure accommodations.

2. Student Centered Advising

Individualized advising and purposeful course recommendations affect the success of LD students. For example, a lecture driven course in a large lecture hall will be extremely challenging for a student with ADHD or dyslexia. The note taking demands and stimulus rich environment can prove to be too much, even if the student has note taking accommodations. Similarly, a student with a non-verbal processing disorder or autism will likely have significant challenges adjusting to the social and communicative demands of a course with group projects. Unfortunately, unless the student discloses their disability, advisors are unaware of the challenges these students face as disability records are not shared with advisors by DRS offices due to FERPA guidelines.

Academic outcomes for the LD population can be improved by allowing and training DRS staff to advise students, or to share DRS student information with advising departments. NorthBridge provides course advisement at its Scottsdale office and has done so for the first two years at the GCC & PVCC pilot sites. The advising addresses course load, complexity of courses, and level of communication with instructors. Additionally, NorthBridge has found that this population does extremely well with schedules that mix both online and in-person courses, particularly early in their college experience. For many LD students, online courses allow them to better focus on the concepts and content as these courses demand less of the student’s social and communication skills (Alligood et al., 2017). But it is important for LD students to take some in-person courses to further develop their communication and social skills.

3. Implement a Response to Intervention Model

Response to Intervention (RtI) models are being implemented in most K–12 school systems as a new way to respond to the instructional needs of their highest need students. The challenges and needs of students in higher education are clearly different from those in the K–12 setting, yet the principles of RtI can be adapted to assist at this more advanced level of learning (Harkins, 2016). Using a RtI framework, NorthBridge assesses the executive functioning (EF) and academic skills, as well as the resilience and the social competence, of students to determine the intensity and type of support needed. An individualized program is then developed for the student using varying intensities of EF coaching, 1:1 academic support (tutoring specific to the student’s current courses), assistive technology, workshops, and organized social events, the efficacy of each, is well researched and founded on the college retention strategies of Tinto, applied for students with disabilities by Getzel and Veenstra (Miller & Albiero-Walton, 2014). The RtI model NorthBridge has successfully used moves students towards greater independence, allowing them to succeed with decreasing support over time (Singley, 2017).

4. GPA data for DRS registered students was provided to NB by MCCCD through DRS Connect

5. RtI Models target the 20% of a population needing additional support to succeed. The 20% is further divided into the 15% needing targeted support and 5% needing intensive support.

6. This is one of the few studies that exist on the efficacy of EF coaching at the postsecondary level. It found that support could decrease or stop once students internalized the EF Skills.
Key Components of an Rti College Success Program for LD Students

Executive Functioning Coaching - This coaching focuses on developing skills and strategies for organization, time management, prioritization, task analysis, task initiation and emotional management. Students meet weekly with their coach for 30 minutes where they:

1. Discuss any pressing issues and celebrate successes,
2. Strategize how to effectively complete course work for the week(s) ahead, and
3. Work on agreed EF goals, that are determined at the start of each semester.

The coaching sessions are the cornerstone of the intervention as the coach can become the student’s socio-emotional bridge to the institution, which has long been recognized as key to any, postsecondary retention programming.

Individualized Tutoring - Students with learning disabilities find that tutoring centers at colleges are difficult to access and are often not geared for LD students. The centers are challenging, high stimulus environments and the tutors are not trained to support the unique learning profiles, and processing challenges, of this population. Confronted with these challenges, many LD students choose not use the tutoring centers. NorthBridge, as well as other university-based LD programs provide students with varying amounts of 1:1 academic tutoring. These programs encourage the student and tutor to identify the student’s most effective learning style, which increases the effectiveness of the tutoring. Such sessions allow EF concepts to be reinforced, such as task analysis, and task initiation.

"NorthBridge provides extra support services that are not typically found on a college campus but have shown to be the tipping point for students who struggle academically. Mentoring, organization, time management skills, and tutoring to students with documented needs are the kind of supports that many students need but are not typically granted as ADA accommodations."

Dr. Amy Rabideau, DRS Manager, GCC.

Specialized Tutoring Lab - In 2016, the Glendale Community College, DRS Office and NorthBridge collaborated to implement a tutoring lab, staffed with tutors trained to support LD students. This DRS Lab was open 15 hours/week and operated on a 4:1 ratio (student/tutor), where up to 60 hours of semi-individualized tutoring could be provided each week. In 2016-17, over 80 students spent 5+ hours in this lab throughout the semester, earning an average GPA of 2.76, which is a half point higher than the DRS student district average. The lab’s success in getting students to utilize the services is in large part due to proximity, student to tutor ratio and the tutors being trained in working with LD students.

4. Welcoming Environment

The social transition is one of the most difficult challenges of postsecondary education for many LD students to navigate, as they are generally less socially skilled and benefit from intentional social-focused programming (Zimmerman, 2017). Three strategies NorthBridge has successfully used to address this challenge are:

- New student orientations for DRS registered students,
- Workshops focused on student-centered topics (communicating with professors, test anxiety, etc) and,
- Organized social events.

Implementing these strategies together through the DRS offices can lead to a greater sense of community for this population. This, like EF coaching, strengthens the socio-emotional connection for students, which directly correlates with greater student success and institutional retention.

The Questions

The foregoing analysis leads to three questions: 1) Can these recommendations be implemented across the Maricopa Community College System? 2) How can they be funded? and 3) What are the financial and social returns?

| NORTHBIDGE SUPPORTED STUDENTS VS MCCCD AVERAGES |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| Key Measures    | NB Scottsdale   | NB Total        | MCCCD           |
| Retention       | 92%             | 100%            | 98%             | 59%             |
| Credit Completion| 83%             | 93%             | 90%             | 75%             |
| Retention       | 81%             | 100%            | 95%             | N/A             |
| Credit Completion| 90%             | 97%             | 94%             | N/A             |
| Retention       | 88%             | 98%             | 94%             | 55%             |
| Credit Completion| 88%             | 96%             | 95%             | 73%             |

7 Students in the GCC & PVCC Pilots have shared this with NorthBridge.
The Opportunity

Maricopa County is ideally positioned to become a national leader in college completion interventions, with ASU’s First Year Success, and the Bridging Success Initiative, Excel, the Veteran Success Project at MCCCD and NorthBridge all contributing to higher retention rates. Our state leaders share this commitment and have established Achieve60AZ to coordinate all efforts towards a more educated workforce. Current programming is focusing on foster youth, first generation students, and veterans. NorthBridge believes that it would be beneficial to add programming focusing on students with learning disabilities to enhance the prospects of meeting the Achieve60AZ goals.

Scaling an RtI Model

With the successful implementation of the Pilot programs at GCC and PVCC, leadership at NorthBridge, MCCCD, and the two pilot colleges, believe that expanding RtI programming to all MCCCD colleges is of critical importance and will lead to increased retention and completion rates. Scaling programming across the district over a five year period will generate data to drive further improvements, leading to increasingly effective and efficient programming. Scaling could begin in 2018-19, expanding programming to three additional colleges, allowing 200 students from families who cannot afford to pay for support to receive success services. Growth could continue by either replicating programming at additional colleges or increasing service levels at the five existing program sites, with the goal of serving 400 students by 2020-21. Scaling would be complete in 2023-24, when 800 LD students across the district would receive the support needed to succeed academically and socially.

Needed Investment and Funding Model

Scaling an RtI model to serve 900 LD students in the MCCCD system will require a substantial investment. However, the return on investment in student success will prove extremely cost-effective when considering both:

1. The positive financial implications of increased student retention rates, and
2. The savings and increased earnings that engaged youth and college graduates add to society (American Institute for Research, 2009).

Bringing the NorthBridge RtI Model to scale will require a coalition of public and private foundations and corporate partners, who are committed to supporting the LD student community and addressing the state’s degree completion crisis, to invest $1,437,500 to fund the program over a 3-year period (through the 2020-21 school year). This investment, combined with the in-kind investments of space, technology, and time (partnership management) made by MCCCD and the individual colleges where programming will occur, will lead to benefits that far exceed the cost. With a three-year commitment, the program will be positioned to scale further as the following accomplishments will lead to additional cost efficiencies and finding opportunities:

- Collection of three years of additional data further validating the RtI model's effectiveness.
- MCCCD will have realized the additional revenue from increased retention and may be willing and able to move beyond in-kind support.
- A sliding-scale fee-for-service option can be explored during the 3-year program which will allow more students to receive services as investment dollars are maximized and become more need-based.

Budget and Returns

The table below shows the projected expenditures and cost/student through the 2020-21 school year and the return on the investment the beneficiaries: students, the Maricopa County Community College District and the community, will achieve.

<table>
<thead>
<tr>
<th></th>
<th>2018-19</th>
<th>2019-20</th>
<th>2020-21</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sites</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Students</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>-</td>
</tr>
<tr>
<td>Cost</td>
<td>$350,000</td>
<td>$487,500</td>
<td>$600,000</td>
<td>$1,437,500</td>
</tr>
<tr>
<td>Cost/Student</td>
<td>$1,750</td>
<td>$1,625</td>
<td>$1,500</td>
<td>-</td>
</tr>
</tbody>
</table>

8 Mesa CC is very interested and district leadership has identified Gateway and Phoenix CC’s as other possible sites.
The community is the third beneficiary. The current degree deficit is only going to get worse unless more of an effective investment is made in our future workforce, particularly for the 2,000 students with learning disabilities who graduate from high school every year. An investment of $1,500 per student is nothing compared to the one-year cost for taxpayers for an unengaged high school graduate - $52,000 (Belfield, Rosen, & Levin, 2012). With two years of support, most LD students will have received the help needed to develop the skills and resilience necessary to earn a degree or certificate, leading to $420,000 in additional earnings over their lifetime (Carnevale, Rose & Cheah 2011). The investment is even more worthwhile when considering that the total cost to support an unengaged high school graduate over a lifetime can be over $800,000 (Carnevale, Rose & Cheah 2011).

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**FINANCIAL RETURNS OF SCALING THE NORTHBRIDGE RTI MODEL**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Students</td>
<td>24</td>
<td>32</td>
<td>45</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>F/F Participant retention Rate</td>
<td>92%</td>
<td>91%</td>
<td>90%*</td>
<td>90%*</td>
<td>90%*</td>
<td>90%*</td>
<td>-</td>
</tr>
<tr>
<td>Number Retained</td>
<td>22</td>
<td>29</td>
<td>40*</td>
<td>180*</td>
<td>270*</td>
<td>360*</td>
<td>901*</td>
</tr>
<tr>
<td>F/F Average retention Rate</td>
<td>55%</td>
<td>55%</td>
<td>55%</td>
<td>55%</td>
<td>55%</td>
<td>55%</td>
<td>-</td>
</tr>
<tr>
<td>Number Retained</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>110</td>
<td>165</td>
<td>220</td>
<td>534</td>
</tr>
<tr>
<td>Additional Students Retained</td>
<td>9</td>
<td>11</td>
<td>15</td>
<td>70</td>
<td>105</td>
<td>140</td>
<td>350</td>
</tr>
<tr>
<td>Net Tuition/Student</td>
<td>$2,100</td>
<td>$2,100</td>
<td>$2,100</td>
<td>$2,100</td>
<td>$2,100</td>
<td>$2,100</td>
<td>-</td>
</tr>
<tr>
<td>Total Additional Tuition Received by MCCCD</td>
<td>$18,900</td>
<td>$23,100</td>
<td>$31,500</td>
<td>$147,000</td>
<td>$220,500</td>
<td>$294,000</td>
<td>$735,000</td>
</tr>
</tbody>
</table>

LD Students and their families are the direct beneficiaries. During the program the growth of their executive functioning and academic skills will empower more of them to persist and earn degrees. With academic success they will enjoy opportunities and earnings that would not be available to them otherwise, as the employment rate, levels of income, and levels of benefits earned by LD college graduates are comparable to those of the general workforce with similar education (Madaus, 2006). Programmatically, the goal is for all students in the program to earn a certificate or an Associate's Degree, which according to the Center on Education and the Workforce, equates to an average increase in lifetime earnings of over $420,000 more than a high school graduate (Carnevale, Rose & Cheah 2011).

The Maricopa County Community College District is also a direct beneficiary as it will realize significant additional revenue as more students persist. The table above uses the Cost-Return Investment Calculator developed by the the American Institute for Research (2009) to illustrate the financial returns MCCCD has realized from the current pilot programs and the additional revenue that could be realized with the new proposed three year program.
Conclusion
Acting on this opportunity to cost-effectively improve the retention and completion rates will help realize the goals of Achieve60AZ of a better prepared workforce. Adopting these recommendations will contribute to more degrees and certificates for the underserved population of LD students who today, disproportionately become opportunity youth. NorthBridge encourages business, education and philanthropic leaders to engage in this critical discussion on how best to support the 2,000 students with learning disabilities who graduate high school each year in Maricopa County.

Next Steps
NorthBridge will continue the ongoing discussions with MCCCD to implement these recommendations, and develop a coalition of community leaders to realize the opportunities of this endeavor. Community leaders are vital to these on-going efforts. In the coming weeks, NorthBridge will ask leaders to make strategic introductions, facilitate financing discussions, and join the coalition to make degrees possible for students with learning disabilities.

Work Cited