MARKET NOTE

A Focus on Customer Experience Management Helps Improve Computer Vision AI Success

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EXECUTIVE SNAPSHOT

FIGURE 1

Executive Snapshot: A Focus on Customer Experience Management Helps Improve Computer Vision AI Success

In this Market Note, IDC investigates some of the more common challenges that result in computer vision (CV) initiatives failures. IDC also introduces the efforts and strategies of Plainsight, a CV AI solutions and platform provider, which has developed a customer experience management focus to improve the efficacy of its customer CV initiatives. Last, IDC provides recommendations and best practices for customer organizations as they think through, implement, and improve the CV initiatives.

Key Takeaways

- Much like any emerging technology, customers are hard pressed to keep up with the rate of change within the CV ecosystem. This is one of the factors that have ultimately reduced the rate of CV initiative success.
- One approach to improve this rate of success is to focus on customer experience management. Further, building a program of initiatives around this concept helps ensure that customers fully understand the end-to-end process, rather than solely focusing on just the CV component.
- Plainsight, a CV AI solutions and platform, shares how its focus on addressing a customer's specific needs and customer experience management has led to CV success. This IDC Market Note highlights several key aspects of Plainsight's strategy and investments in these areas.

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IN THIS MARKET NOTE

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The Spectrum of Customer CV Use and Readiness

CV, much like any emerging market or technology, is evolving so quickly that the ecosystem has yet to settle on a standardized, accepted approach to engage with technology buyers that span both IT and line of business (LOB). These potential and current CV customers are increasingly seeing its value within their organizations, but they need to balance this potential with the needs, timelines, and resources that they can bring to bear.

Further, IDC sees that an organization's CV readiness and adoption often varies but can generally be summarized as being somewhere on the following continuum:

- Net, greenfield CV customers seek information and education on CV tools, technologies, and vendors. These organizations know there is a need to pursue CV, but invest in experimentation, knowledge gathering, and baseline understanding prior to pursuit.
- New, greenfield CV customers seek to engage with the CV tools and technology ecosystem for a specific project or use case to better understand CV capabilities and organizational fit.
- Existing CV customers that are actively seeking or have deployed CV solutions to date, and these customer organizations generally fall into one of three groups:
  - Organizations deploying CV focused around a single or limited set of use cases. When in production (or if these CV initiatives are unsuccessful), organizations do not expect to grow or expand CV as part of their strategy in the near term.
  - Organizations are deploying CV today with the expectation of future use case growth. These organizations may be looking to expand CV use within the same, initial deployment domain or as part of a larger, cross-functional initiative.
  - Organizations have invested in an initiative to deploy CV, but that initiative was unsuccessful.

In IDC's research and discussions with technology suppliers, professional services firms, and end users/technology buyers, it is this last group that is the most interesting and critical for the ecosystem to understand. In fact, more often than not, IDC has learned that a CV vendor's customer reference may have worked unsuccessfully with another vendor prior.

Common Ways CV Initiatives Fail

IDC research has shown that there are several main reasons why CV solutions do not meet a customer's expectations. This includes:

- **Unrealistic expectations.** Although the CV ecosystem's tools, technologies, and expertise is strong and improves daily, it still isn't magic. Fully understanding where, how, and why CV can and needs to be used for a particular use case remains a challenge. For many use cases, a "good enough" approach is sufficient, but when near 100% precision, confidence, or accuracy is required, the level of effort and investment may not be fully understood.

- **Vendor capability and technology mismatches.** For most use cases, a turnkey, AutoML-based approach remains a pipe dream. Customers need to align with vendors that help them think through the entire CV life-cycle process. CV rarely comprises the end-to-end solution, and instead needs to be thought of as a critical cog in the process of solving a business problem.
- **Lack of internal alignment and buy-in.** CV solutions require the sponsorship of both the technical and line of business teams to be successful. Organizations need to ensure that both are represented and bought in at all phases of a CV initiative to maximize alignment and ROI.
- **Resource availability and skills challenges.** Most tech buyers don't have an available team of data scientists and ML engineers at the ready to help them with CV. Instead, organizations need to understand where and how internal resources, technology abstraction and optimization, and third parties can be leveraged.
- **Not designing with scale in mind.** Although there are many ways to solve a problem with CV, understanding and correctly defining the "how" for a given use case or organization is critical to ensure that a CV solution is successful from ideation to deployment and eventually to continual improvement.
- **Seeing deployment as the destination.** CV solutions must remain iterative post-deployment. Models require continuous human-in-the-loop supervision to maintain efficient, accurate, and ethical/responsible outcomes. Organizations need to think through the operational life cycle of a CV deployment to ensure sufficient dedicated governance and rigor for model updates and incorporation of feedback.

Plainsight: Developing a Scalable Approach to Successful CV Deployment

Plainsight, a United States–based CV AI solutions and platform provider, shared with IDC its techniques and strategies to help improve the successful implementation rate for its customers. In particular, the Plainsight team has focused on building its engagements around specific customer needs as well as customer experience management. The Plainsight team uses this focus to develop the necessary touch points and support needed to help its customers navigate through the fast-moving CV space for a first use case, as well as to establish a repeatable approach for future CV. Of course, the level of experience management provided by the Plainsight team varies based on the specific customer, but there are several areas that the team sees as essential accelerators to deliver positive results and outcomes for its customers. These include:

- **Facilitating the alignment of a cross-organization customer governance program.** Although deploying CV may be viewed as largely a technology problem, there needs to be balanced representation from the technology and LOB teams to be successful. These resources need to be brought in early within a CV opportunity to ensure that the problem is fully understood, KPIs and ROI are known, downstream and upstream process requirements are documented and incorporated, and there is sufficient accountability and engagement to overcome any future obstacles, roadblocks, and challenges.
- **Aligning on a final architecture plan as part of the design phase.** Plainsight uses the analogy of comparing a CV solution to constructing a house. In this way, there needs to be sufficient structural blueprints of the foundation and agreed to "skeleton" in place before any building should occur. Plainsight indicated that customers often incorrectly focus on the time needed to stand up a demonstration, PoC, or trial as a metric for success. Although these limited initiatives can deliver value in terms of visualizing production potential, impact, and technical viability, they often fail to consider the changes necessary to take the next step, into full-scale production.

- **Developing a customer-specific plan to transition to their ideal, long-term CV usage approach.** Plainsight recognizes that the level of dedicated support and training for a new customer may not align with their long-term vision for how they will engage with CV. For instance, many customers look to a crawl-walk-run approach for understanding and using CV. Plainsight has built in repeatable processes to help customers transition along this continuum to progress from following and learning to eventually doing. Although some customers envision leveraging significant third-party engagement and resources for all future CV initiatives, Plainsight has invested heavily in enabling self-service fundamentals to support customers looking to transition to a longer-term software licenses and ad hoc support-only model.
- **Building in support guardrails that facilitate future customer autonomy and CV usage growth.** Plainsight understands that CV's applicability is broad, and thus the complexity of a future initiative may increase from beyond that of the initial use case. Plainsight has invested heavily to build the software and repeatable processes to both increase the rate of success of a first CV deployment and help an organization rapidly and efficiently scale future initiatives and deployments.

Plainsight Customer Example: JBS USA's Cattle Operations

JBS USA, one of the world's largest food processing companies, routinely looks to technology as a force multiplier to help solve its labor, efficiency, and quality pressures. CV is seen as an increasingly critical technology tool for JBS, and although it can be used in many areas, it sees significant potential in applying CV to improve the effectiveness of its extensive operation's footprint. One specific CV use case that the JBS team saw as fundamental to pursue was the automation of livestock detection and counting. In this way, the JBS team was looking to enable a more accurate and less stressful way to accurately measure the ingress and egress of expensive, valuable livestock at their facilities.

After an unsuccessful attempt developing a CV-based production counting solution with another CV platform provider, the JBS team contracted with Plainsight. The Plainsight team's approach to engage with JBS in a collaborative and consultative capacity enabled the establishment of a baseline solution architecture, infrastructure requirements, data acquisition and model development strategy, and eventually a scalable deployment approach for the livestock counting use case. Plainsight and JBS ultimately aligned on building a customized CV model on Plainsight's platform that would be optimized for deployment at the edge utilizing NVIDIA's GPUs. JBS and Plainsight's solution leveraged a pilot to test the efficacy of the solution and demonstrated a 99.7% livestock counting accuracy after only 3 weeks. The solution was quickly greenlit for deployment across much of JBS' United States footprint. The long-term success of the solution was driven by centralizing end-to-end vision AI processes into one intuitive interface for data collection and labeling as well as for model training, deployment, and operationalization through the Plainsight platform.

What is most noteworthy to IDC is that Plainsight's focus and efforts to successfully design, develop, and deploy the original counting use case for JBS created sufficient momentum that has since resulted in a pipeline of future CV use cases. JBS and Plainsight are investigating additional CV use cases in the areas of worker safety compliance, PPE detection, and livestock health monitoring.

IDC'S POINT OF VIEW

To support and reinforce the notion that the successful adoption of CV remains a challenge for many customer organizations, IDC wanted to reiterate some best practices and recommendations. This includes:

- **Prioritize CV use cases that have clear, measurable ROIs.** Do not underestimate the power of quick wins. IDC has seen that organizations that have pursued use cases with a clear problem statement and well-understood fundamentals tend to have a greater likelihood of short- and long-term success.
- **Investigate the CV ecosystem to find vendors that align with your organizational needs and constraints**. No single vendor today is able to sufficiently support all customer CV requirements. Whether its conflicts that arise from insufficient expertise around a specific domain or use case, inconsistent up-front platform engagement and support, difficult to utilize UI/UX, or even misaligned business/pricing models, technology buyers must perform sufficient due diligence to select a vendor that most closely aligns with their needs.
- **Think through the cross-functional team needed to fully represent the end-to-end process for a CV use case.** Establishing this team early in the process will ensure that timely, contextualized decisions regarding CV initiatives can be made, including alignment on selecting and measuring solution KPIs and ROI. Further, this cross-functional team can be utilized as a foundation to gauge the best approach for centralizing CV governance.
- **Build a robust process for CV use case life-cycle management**. IDC continues to hear that many failed CV initiatives happen due to lack of consideration and investment in life-cycle management. Ensure that there are sufficient resources and alignment to support the solution post-deployment, including sufficient thought into the process for CI/CD, as well as ML Ops.

LEARN MORE

Related Research

- *Investigating Computer Vision's Potential at the Edge* (IDC #US49055022, May 2022)
- *IDC Market Glance: Computer Vision AI Software Tools and Technologies, 4Q21* (IDC #US47737021, October 2021)

Synopsis

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