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# **Powering Cinema Real-Estate Renovations and Transactions in a Covid-world.**

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## **About This Paper**

From product manufacturers and food producers through to financial institutions, retailers and the leisure sector, real-estate is one of, if not the most important asset. In the climate of a pandemic, businesses throughout the world have been forced to make substantial changes to the layout and operations of their businesses in order to create safe spaces for employees and customers alike. In some cases, areas of the leisure and entertainment sector businesses such as restaurants and bars have taken advantage of increased commercial real-estate availability or landlords offering rent reductions and rent-free periods along with local government rate reductions to physically expand their operations to either provide enough safe-space to maintain pre-pandemic occupancy levels and restore profitability or to grow their businesses accordingly.

However, being able to make informed decisions on modifying or procuring real-estate now presents new challenges never experienced before, particularly for businesses seeking to expand regionally and internationally either through growth or business acquisition due to restrictions such as social distancing, travel exclusions and quarantine regulations.

This report, which will be primarily focused at the cinema sector, aims to showcase the importance of accurate real-estate information and the value that digital documentation and data can have, not just in driving operational efficiency and utilisation rates of a building but also in determining the as-is state of buildings and the potential for these spaces as part of a transaction.

## **The Value of Accurate Documentation**

Almost all commercial property acquisitions are a lengthy process involving complex negotiations, due diligence and legal processes and these rely on detailed documentation regarding the property or business which is due to be acquired. From turnover, profitability, working practices and day-to-day operations through to the value of the real-estate, machinery and equipment each element enables informed decisions to be made and an overall value derived based on the potential opportunity.

The spread and severity of Coronavirus globally has forced significant changes to the way in which businesses operate, their opening times, occupancy levels and fit-out. In turn this has had a profound impact for potential purchasers in terms of the accessibility of real-estate targets where vital infrastructure data needs to be gathered in order for accurate valuations to be made.

For those seeking to carry out property transactions outside of their locale, access to the site or sites is further complicated by local government travel restrictions, international travel bans and enforced quarantine periods thus making the process of surveying and assessing potential property and business transactions substantially more complex, costly and with increased risk to those teams tasked with carrying out those assessments.

## **Real-Estate Documentation for Cinemas**

The digitisation of design and construction processes over the past twenty years and specifically the past ten years has enabled project costs and risks to be better managed through the creation of rich data. That level of information has enabled more holistic and coordinated designs, greater collaboration between collaborative partners and provided clients (typically the building owners) with the ability to interrogate designs digitally during the conceptual phase to create better and more informed decisions.

All of these positive outcomes have enabled better planning and phasing of modern projects, and whilst the construction industry still has some way to go to realising all of the benefits of those efficiencies, the improvements already realised have driven substantial efficiencies in productivity, improved on-site safety and reduction in material waste.

And it's not just in the design and construction phases that this rich data has use but beyond, in to the ongoing management and maintenance of the building throughout its lifecycle including refurbishments and in the case of retail and hospitality, potential property transactions.

Looking more specifically at the global cinema industry, out with of recently developed markets such as China, parts of Asia, Russia and the Middle East, a significant proportion of constructed real-estate, and in particular in the multiplex sector, pre-dates the availability of modern design and construction tools and processes. And despite cinemas having undertaken various wholesale refurbishments over the past two decades (stadium seating, digitisation, luxury seating) and with significant market consolidation or acquisition also forcing material changes to the cinema itself, often through cost containment, upgrade projects have created incremental drawings rather than iterative datasets or completely new design data that reflects the "as-is" record of the real-estate.

## **Digitising Commercial Environments for Transactions**

Reality Capture or Digital Laser Surveying is fast becoming an enabler to real-estate transactions globally either as a sales or verification tool. The rapid method of accurately mapping the existing context or environment enables the physical world to be created in a virtual environment with minimal manpower resources (no more than two people, but typically, only one) thus it provides a cost-effective solution. However, the speed and level of highly accurate rich data captured dramatically minimises time on site and almost always avoids the requirement for repeat visits, in fact most cinemas can be surveyed digitally inside one day.

Set against the backdrop of Coronavirus with enforced travel restrictions and the requirement to reduce risk to employees, the hands-off approach that digital surveying offers can allow transactions to still take place efficiently and whilst managing costs.

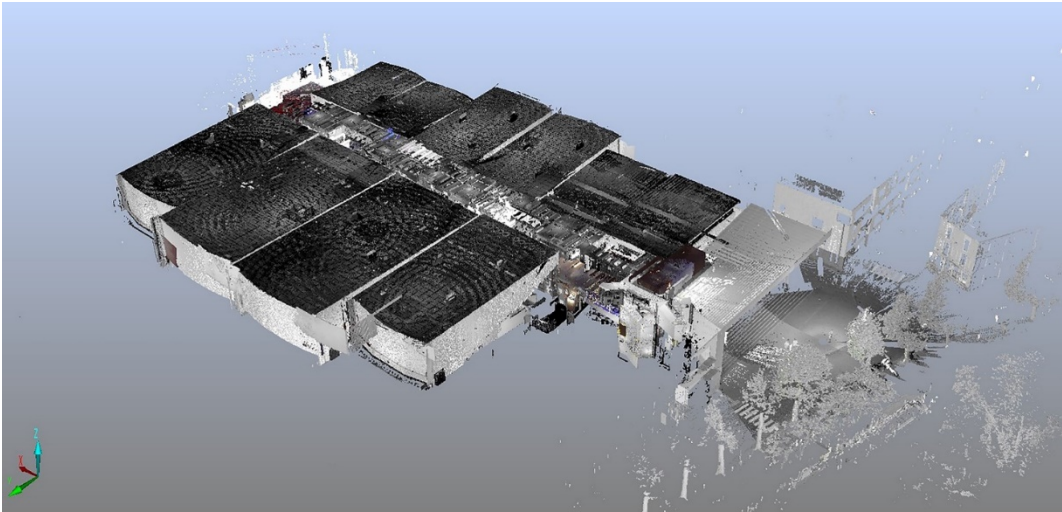


Fig 1: Resulting point cloud obtained from reality capture of cinema site.

The survey itself produces millions of data points which create a point cloud that can be manipulated and enhanced to provide highly accurate 2D drawings and 3D BIM models useable with software packages from leading software vendors such as Autodesk and Bentley.

But beyond this and even prior to drawings or models being commissioned, the captured data can itself be interrogated to gain vital information regarding the building. Processed and registered data allows potential buyers or project stakeholders to walk through the entire environment and assess spaces using highly accurate measurement tools with the capability to measure in X, Y and Z co-ordinates thus deriving true measurements of spaces. Dependent upon the delivery platform, the data can also be used to identify and tag assets. Accordingly, the entire dataset can be used to verify that previously available documentation is accurate and in the case of a property transaction a correct valuation is derived.



Fig 2: Directly obtained measurements from a point cloud.

## Cost Comparison and Benefits

Reality Capture can be a key enabler in digitising business processes, particularly in relation to business transactions and planned renovations, particularly in the current climate. Whether utilised as part of a sales information pack or as part of due diligence, a digital survey provides a cost-effective solution. The below table showcases the total cost of ownership and the benefits from a digital survey over a traditional manual survey.

	Digital Survey	Manual Survey
Resources Required	1 person	Minimum 2 people
Time Per Auditorium	5 minutes	2 - 3 hours
Accuracy	Highly accurate, devices self-calibrating, +/- 0.2mm over 100m	Open to human error in measurement and recording
On Site Days Taken	< 1 day	2 - 3 days
Outputs	Complete digital dataset	List of key measurements
Delivery Time	3 - 5 Days	Up to 2 - 3 Weeks
Typical Cost (fees, travel and expenses)	\$7,000	\$8,000
Cost of Return Visit to Site	N/A (only one visit required)	\$2,000
Total Cost	\$7,000	\$10,000

## Defining A Return On Investment

Data and documentation inaccuracies can cause significant differences in valuations of properties or the rental fees. Of course, these are more substantially exaggerated in areas of prime real estate but consider the following from the perspective of a cinema exhibitor looking to acquire an existing site:

*Cinema space comprising of 25,000sqft with a rental cost of \$30/sqft per annum results in an annual rental of \$750,000. Assuming that the square footage of the real-estate has been inaccurately state by as little as 1% due to an error in a manual survey, the cost differential on the annual rental could be in excess of \$7,500 thus a return on the digital survey would be realised in under 11 months.*

## The Ongoing Value of Captured Data

### Digital Asset & Facilities Management

Beyond being used in a transaction, data created can serve as an important part in the ongoing management of assets and facilities.

Facilities management depends upon the collection and storage of data associated to assets and their respective locations. For new build projects that are planned with BIM in mind, a full 3D model is always produced. However, for existing building this is

often impractical and costly. Both of these factors ultimately mean that facilities management practices are lacking for existing buildings.

Various platforms exist that allow the captured data to be tagged to assets to assist with their management such as part codes, serial numbers without the requirement for a 3D model to be produced although there are obviously benefits to producing fully detailed and coordinated 3D BIM models with associated drawings as part of a more complete facilities management solution.

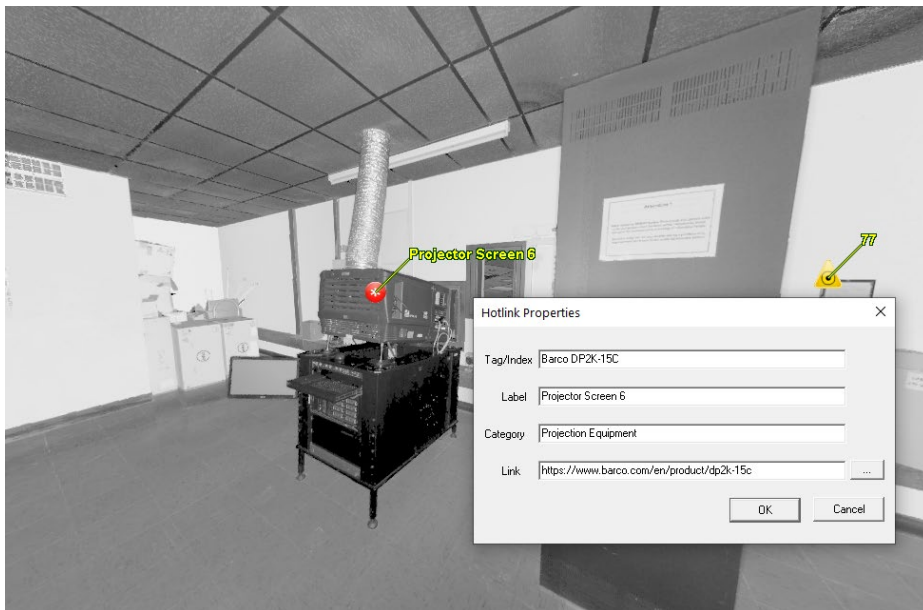


Fig 3: Asset tagged in processed point cloud data.

## Refurbishment Projects

Cinemas are constantly evolving environments that have to adapt to meet the changing requirements of movie-goers. However, whilst consumer demands are one element, the adoption of new and emerging technologies that drive incremental revenue or allow for cost containment also drive changes to the infrastructure of a cinema, digital signage being a prime example.

The value pre-existing data can bring to future projects cannot be underestimated and this extends beyond simply showing the as built situation and the utilisation of data to form drawings or BIM. Point cloud data can be used to create digital simulations of proposed alterations to a building to identify the impact these may have on the customer journey from ingress, egress, queues, pinch points and signage placement opportunities. This of course may even extend to temporary installations of PPE in response to Coronavirus to provide safe spaces for movie-goers.

The ability to map the path of customers through the cinema allows for concession-spaces to be optimised to improve revenue-generation whilst also providing a more positive customer-experience.

*Further information on simulation can be found by reading the Harkness White Paper entitled "The Value of Design Data, Surveying And Simulation In Optimising Cinema Operations And Creating Safe Spaces."*

## **Conclusion**

As we find ourselves in an economically uncertain period due to Coronavirus, it is likely that the global cinema market will change dramatically as exhibitors look to restructure their businesses accordingly. And these changes are likely to see cinemas sold to raise capital or reduce cost and sadly, in established markets, not all cinemas will survive. For those seeking to conduct any type of transaction, the importance of accurate performance data and indeed up-to-date real-estate information cannot be understated as a method for deriving an accurate valuation (either in sqft or on a cost per screen basis).

Obtaining real estate information if it does not exist or is not up-to-date now has substantial complications. Cinema operators can utilise third party companies (under strict NDAs) to carry digital surveys as a low-cost, low risk and highly accurate solution to enable expedited real-estate transactions with enormous incremental benefits such as facilities management and project planning beyond the life of the transaction. With a measurable and more often than not short return on investment, the deliverables enable decision makers and key influencers irrespective of geographic location to access locations that due to travel restrictions may not be possible or may present high levels of risk to health.

The financial benefits from simulation can also be significant both in terms of obtaining accurate valuations and maximising revenue by optimising space utilisation.

## **Harkness' Expertise in Survey and Simulation**

Harkness has been embedded at the heart of the cinema industry for in excess of ninety years. Our unique history and understanding of technology and the built environment has enabled us to assist exhibitors (and indeed their design teams) around the world to drive better outcomes from their new build and refurbishment projects. Harkness' global Reality Capture team possesses over 60 man-years' worth of experience supporting projects throughout the world using best-in-class surveying equipment, state-of-the-art design and simulation software and methodologies unique to Harkness and the cinema market.

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