

Transcelestial

Intangibles Disclosure Framework Example Report

This is a brief analysis of Transcelestial's Intangible Assets (IA) using the Intangibles Disclosure Framework (IDF).

The IDF outlines principles for businesses to disclose and communicate their IA such as brand value, patents or registered designs in a systematic and comprehensive way.

The disclosure principles in the IDF are anchored in four pillars: Strategy, Identification, Measurement, and Management (SIMM).

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An Overview of Transcelestial

Transcelestial is building the future of Internet distribution with a mass-produced solution for superfast global Internet distribution.

This solution leverages its proprietary wireless laser communication technology to create a wireless distribution network between buildings, traditional cell towers, street-level poles and other physical infrastructure with a much lower total operating cost for Mobile Network Operators, Internet Service Providers and enterprises.

Installing Transcelestial's technology is significantly faster than fiber cables and is highly automated – for example, Transcelestial's CENTAURI devices have been installed, aligned and deployed within half a day.





STRATEGY

Key Competitive Advantage

Transcelestial's lasercomms tap into a delicate balance of precision and stability, regardless of contextual factors such as extreme weather. To put the problem into context, Transcelestial's technology involves accurately beaming a laser as thin as a single hair strand into a smartphone-sized window 3 km away. All the while, both the laser and the window are moving but must continue to perform reliably.

Transcelestial has developed the technology and underlying AI algorithms to point and track laser beams with an enhanced degree of precision. Its solution can also sense weather conditions and automatically and pre-emptively modulate laser power to ensure continuous data transmission, enabling always-on connectivity even in unfavourable weather conditions.

The installation of Transcelestial's technology is highly automated and significantly faster than fiber cables, with the CENTAURI devices being installed, aligned and deployed within half a day. In comparison, laying fiber cables is significantly more expensive and can take months to get to market. More steps are required, from seeking approvals to lay the cables underground to physically digging trenches – and that's all before factoring in future maintenance.

Creating Sustainable Value

Value Creation (Past)

1. **Identified Challenges:** Recognised the limitations of existing wireless technology as a bottleneck in meeting current communication needs, especially with increasing demand for bandwidth.
2. **Laser Communication Technology:** Identified laser communication as a key enabler for high-bandwidth communication, noting two major market adoption gaps: reliability and manufacturing cost.
3. **Investments in Reliability:** Invested heavily in Pointing, Acquisition, and Tracking (PAT) systems for laser communication and developed weather reliability algorithms to enhance system reliability.
4. **R&D for CENTAURI Platform:** Committed substantial resources to research and development to create the CENTAURI product platform, aiming to provide a future-proof communication solution.
5. **Manufacturing Facility:** Established a high-capacity, highly optimised manufacturing facility in Singapore to produce reliable and cost-effective products.



6. **Strategic Partnerships:** Formed strategic partnerships with leading telecom operators and technology providers to validate and deploy the CENTAURI platform in real-world settings, proving the new technology to the market.

Value Creation (Present)

1. **Scaling Production and Deployment:** Focused on scaling the production and commercial deployment of CENTAURI, particularly in markets experiencing fiber deployment delays due to COVID-19.
2. **Partner Network Expansion:** Building the Transcelestial Partner Network to extend market reach and collaborate on joint solutions, maximising return on investment and fostering business growth.
3. **Industry Validation:** Expanding collaborations with key referenceable telecom operators to establish CENTAURI as a critical solution in the industry.

Value Creation (Future)

1. **Enhancing IA/IP Portfolio:** Continue to innovate and improve the CENTAURI platform with new iterations, such as offering higher bandwidth capabilities of 25Gbps and 40Gbps, and extended range.
2. **Exploring New Markets:** Expand into new markets, including space communications, with plans to deploy a network of over 700 microsatellites in low Earth orbit to provide global connectivity.
3. **Space Data Centers:** Develop and integrate laser communication technology for space data centers to offer edge computing and cloud services in space. This initiative will drive the maturation of space markets and enable the delivery of new products and services, establishing Transcelestial as a leader in space communication.
4. **Shift to Services:** Transition from a product-focused approach to offering comprehensive services, providing end-to-end solutions and integrations for their customers.



IDENTIFICATION	MEASUREMENT
Key Intangibles	Metrics and Drivers
<p>Technology –</p> <ul style="list-style-type: none"> • Patent portfolio for the key high-speed laser communication system and a key enabling subsystem. • In-House Technology Development: Focused on developing cutting-edge technology. <p>Manufacturing and Capacity:</p> <ul style="list-style-type: none"> • Established technology foundation for high-speed connectivity, currently the world's fastest at 40Gbps. • Proprietary optical calibration process and manufacturing techniques. 	<ul style="list-style-type: none"> • 6 patents filed and pending on high-speed laser communication systems • 1 patent pending for a key subsystem. • R&D Investment: Over \$10 million USD invested in research and development.
<p>Human capital –</p> <ul style="list-style-type: none"> • Expert Team: Over 20 world-class experts in laser communications. • Scientific, Commercial, and Executive Board: A team of subject matter experts. • Institutional Knowledge: Comprehensive database, knowledge base, training, and certification programs. 	<ul style="list-style-type: none"> • Number of world-class experts in laser communications on the team.
<p>Contract –</p> <ul style="list-style-type: none"> • Partnerships: Collaborations with distributors in Southeast Asia and North America, supported by a trained team of technical experts and a robust stock of products. 	<ul style="list-style-type: none"> • Distributor Partnerships: Number of partnerships with distributors in Southeast Asia and North America. • Technical Experts: Number of trained technical experts. • Product Stock: Availability and stock levels of products.



Key Intangibles	Metrics and Drivers
<p>Customer –</p> <ul style="list-style-type: none"> • Transcelestial Partner Network: Program includes resellers, technology developers, and distributors to expand market reach, offering training, certification, and co-marketing opportunities. • Global Footprint: Established presence in over 10 countries, including Southeast Asia, North America, and Oceania. • Flagship Product Line: CENTAURI. 	<ul style="list-style-type: none"> • Partners: Total number of partners in the Transcelestial Partner Network. • Major Telcos: Number of major telecom operators partnered with. • Active Countries: Number of countries where Transcelestial is operational. • Trial Subscribers: Number of subscribers from trial partners.
<p>Marketing –</p> <p>CENTAURI Trademark</p> <p>Industry and Global Awards. Transcelestial has won numerous industry and global awards such as:</p> <ul style="list-style-type: none"> • Most Frontier Company by Asiastar10x10, SPIFFY San Andreas Award for Most Disruptive Technology by Telecom Council, • Forbes Asia’s 100 Companies to Watch, • Forbes 30 Under 30 and Prestige 40 Under 40 to their CTO Dr. Mohammad Danesh, • Tatler Gen T list to their CEO Rohit Jha, • Edge 35 Under 35 to their CEO Rohit Jha, • The Most Ambitious Start-Up in Photonics Award by The Optical Society (OSA). 	<ul style="list-style-type: none"> • Number of trademarks registered • Awards: Total number of industry and global awards received • Search Engine Ranking: Achieving the highest ranking for relevant keywords such as "high-speed connectivity." • Marketing Investment/press releases: Amount of dollars invested in marketing activities/press releases • Jointly Published Case Studies: Number of case studies published in collaboration with partners. • MOUs: Number of Memorandums of Understanding (MOUs) signed with key partners, such as Axiom. • Launch Events: Number of product launch events held.



MANAGEMENT

Transcelestial has a robust system of managing their intangible assets, involving their Board of Directors and senior management.

Board Governance:

- Management of intangible assets is overseen by their Board of Directors, which provide strategic advice as well as good governance. This ensures company compliance with key risk management processes regarding their core intangible assets.

Legal Oversight:

- Their in-house legal team reviews all company contracts, including intangible asset-related clauses.
- Transcelestial leverages the services of a global IP firm to strengthen IP management.
- There is an internal IP task force to manage IP matters.

Key processes include:

- Quarterly reviews of current and future IP.
- Standard operating procedures on protecting manufacturing IP and software algorithms.
- Non-disclosure agreements protocols.
- Enforcement of non-compete clauses.

Regulatory Relations:

- They maintain close relationships with regulators in various countries to ensure compliance and smooth operations.



Find out more about the Intangibles Disclosure Framework [here](#).

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