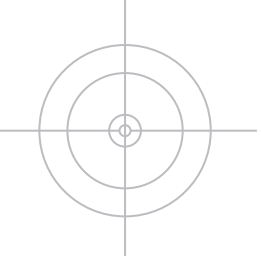


T H E W A Y I S I N T H E T R A I N I N G



being there...

ZEN TECHNOLOGIES LIMITED



THE WAY IS IN THE TRAINING



Zen (zen) n. [[Jpn <Chin ch'an, ult. <Sans dhyāna, thinking, meditation]] a sect of Buddhism, seeks to attain an intuitive illumination of mind and spirit through meditation.

- FROM WEBSTER'S NEW WORLD DICTIONARY

being there...

Our training simulators project situations realistically. The combat situations are patterned in such a way that the trainee benefits immensely. It is said that the best training is actual combat experience in a battlefield. Zen simulators artificially duplicate the actual combat scenarios so realistically that personnel trained get the feeling of actually **being there...**





Our products

Zen has been at the forefront of applying new technologies and developing new products and is actively involved in the indigenisation of technologies, which are helpful for security forces in India and other friendly countries.

Defence

- 81 mm Mortar Integrated Simulator
- Zen Advanced Weapons Simulator (Zen AWeSim®)
- Air-to-Ground Firing Range Scoring System
- Zen Anti-Aircraft Air Defence Simulator (Zen 3ADS)
- Zen Anti-Tank Guided Missile Simulator (Zen ATGM® Sim)
- Zen Armour Combat Training System (ZEN ACTS™)
- Zen Artillery Forward Observers Simulator (Zen ArtyFOS)
- Zen Automatic Grenade Launcher Simulator (Zen AGL Sim)
- Zen Infantry Combat Vehicle Driving Simulator (Zen BMP II DS)
- Zen BMP II Integrated Missile Simulator (Zen BMP II IMS)
- Zen Carrier Mortar Tracked Simulator (Zen CMT Sim)
- Zen Combat Training Centre (Zen CTC)
- Zen Combat Training Simulation System (Zen CTSS)
- Zen Containerised Indoor Shooting Range (Zen CISR)
- Zen Containerised Tubular Shooting Range (Zen CTSR)
- Zen Driver Aptitude Testing System (ZEN DATS™)
- Zen Driving Training Simulator (ZEN DTS®)
- Zen Hand Grenade Simulator (Zen HE36S®)
- Zen Infantry Weapons Training Simulator (Zen IWTS®)
- Zen Master Control Station for Live-Firing Ranges (Zen MCS)
- Zen Medium Machine Gun Simulator (Zen MMG Sim)
- Zen Multi-Functional Target System (Zen MFTS®)
- Zen Robotic Targets
- Zen Rotary Wing Simulator (Zen RWS)
- Zen ShootEdge®
- Zen Shoot House for Live and Simulated Indoor Tactical Training
- Zen Small Arms Training Simulator - Stand Alone (Zen SATS® SL)
- Zen Smart Target System (ZEN STS®) - LOMAH®
- Zen Tactical Engagement Simulator (Zen TacSim®)
- Zen TacSim® with Indoor Tracking System (ITS)
- Tank Simulators
 - Tank targets
 - T72 Crew Gunnery Simulator
 - T72 Tank Driving Simulator
 - T72 Tank Gunnery Simulator
 - T90 Crew Gunnery Simulator
 - T90 Tank Driving Simulator
 - T90 Tank Gunnery Simulator
- Zen Tank Zeroing System (Zen TZS)
- Zen UAV Mission Simulator (Zen UAV Sim)
- Zen War Gaming Solutions (Zen WGS)

Homeland security

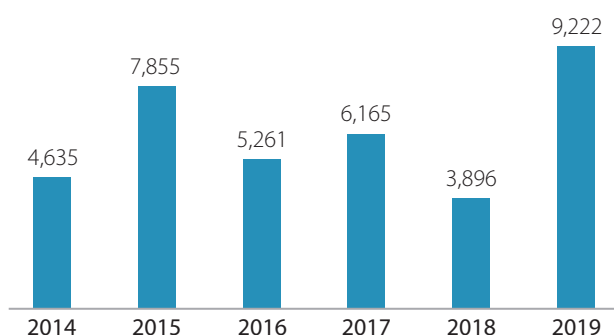
- Zen 81 mm Mortar Integrated Simulator (Zen 81 mm MIS)
- Zen Advanced Weapons Simulator (Zen AWeSim®)
- Zen Air-to-Ground Firing Range Scoring System
- Zen Artillery Forward Observers Simulator (Zen ArtyFOS)
- Zen Automatic Grenade Launcher Simulator (Zen AGL Sim)
- Zen Carrier Mortar Tracked Simulator (Zen CMT Sim)
- Zen Combat Training Centre (Zen CTC)
- Zen Containerised Indoor Shooting Range (Zen CISR)
- Zen Containerised Tubular Shooting Range (Zen CTSR)
- Zen Driver Aptitude Testing System (ZEN DATS™)
- Zen Driving Training Simulator (ZEN DTS®)
- Zen Hand Grenade Simulator (ZEN HE36S®)
- Zen Master Control Station for Live-Firing Ranges (Zen MCS)
- Zen Medium Machine Gun Simulator (Zen MMG Sim)
- Zen Multi-Functional Target System (Zen MFTS®)
- Zen Robotic Targets
- Zen Rotary Wing Simulator (Zen RWS)
- Zen ShootEdge®
- Zen Shoot House for Live and Simulated Indoor Tactical Training
- Zen Small Arms Training Simulator - SL (Zen SATS® SL)
- Zen Smart Target System (ZEN STS®) - LOMAH®
- Zen Tactical Engagement Simulator (Zen TacSim®)
- Zen TacSim® with Indoor Tracking System (ITS)
- Zen UAV Mission Simulator (Zen UAV Sim)

Driving

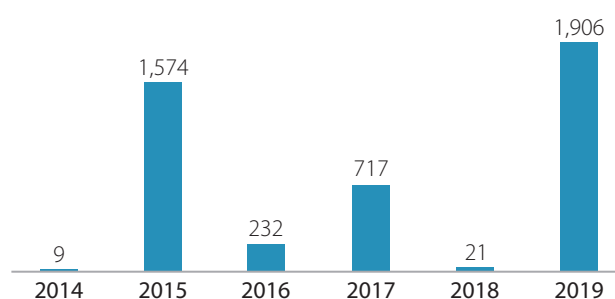
- Zen Automated Driving Simulator (ZEN ADS™)
- Zen Driving Simulator (Zen DS)
- Zen Bus Driving Simulator (Zen BusSim)
- Zen Driver Aptitude Testing System (ZEN DATS™)
- Zen Driving Training Simulator (ZEN DTS®)
- Zen Tatra Driving Simulator (Zen TDS)

Performance of the Company at a Glance

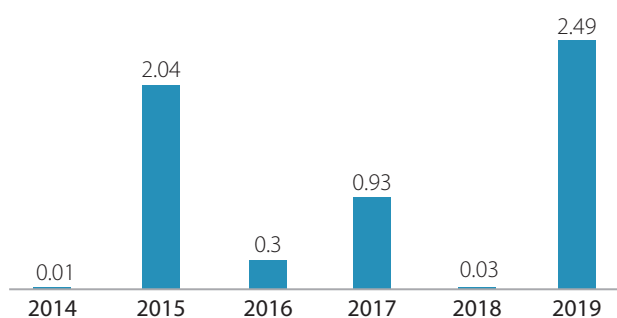
TOTAL INCOME (₹ in lakhs)



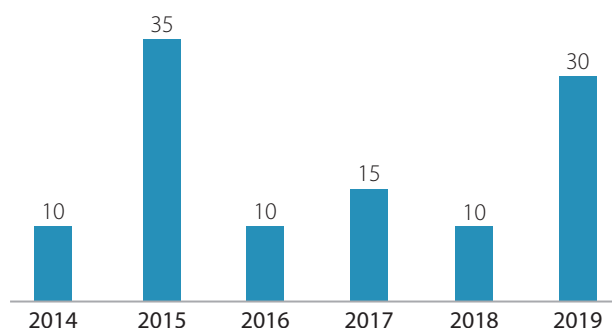
PROFIT AFTER TAX (₹ in lakhs)



EPS (₹)



DIVIDEND (%)



Content

• Chairman and Managing Director's Overview	5
• Corporate Information	7
• Notice to Shareholders	9
• Boards' Report	19
• Management Discussion and Analysis	42
• Corporate Governance Report	47
• Auditor's Certification on Corporate Governance	59
• Certification by Chief Executive Officer and Chief Financial Officer	60

Standalone Financial Statements

• Independent Auditor's Report on Financial Statements	63
• Balance Sheet as at 31 March 2019	68
• Statement of Profit and Loss for the year ended 31 March 2019	69
• Cash Flow Statement for the year ended 31 March 2019	70
• Notes on Financial Statements	72

Consolidated Financial Statements

• Independent Auditor's Report on Financial Statements	106
• Balance Sheet as at 31 March 2019	110
• Statement of Profit and Loss for the year ended 31 March 2019	111
• Cash Flow Statement for the year ended 31 March 2019	112
• Notes on Financial Statements	114

ECS Mandate form	147
------------------	-----

Proxy form	149
------------	-----

Attendance Slip	151
-----------------	-----

Road Map	152
----------	-----

Chairman and Managing Director's Overview

Overview

Strengthening my view last year, the Indian defence procurement is moving decisively towards encouraging indigenization. It is favourably transforming the prospects of companies like Zen that have spent huge amount of resources on R&D and have created world-class products with complete ownership of IP. Zen had to pay costs in terms of lesser short term profits in search of long-term sustainable advantages. We are reaping the benefits now.

Orders from the Indian Government will continue to be lumpy, but a decisive journey has indeed begun. Going ahead, the volume of Defence procurement from the private sector is only likely to grow and will be spread across a wider range of products. The stress on a growing proportion of indigenous content in systems/sub-systems being procured is heartening news for research-driven players like Zen.

The principal message that I wish to communicate is that Zen Technologies is attractively placed to capitalise on the watershed moment in transformation of India from the ignominy of being the largest importer of defence equipment to an aspiring, definitive and large player in the defence exports market. The support from Indian Govt will make it possible. Ignore the negativities being felt, the reality hasn't been more comfortable for Zen until now.

Positioning

Over the years, Zen selected to specialize in the security training solutions niche that is core to the security preparedness of any country – few meters wide but a miles-deep positioning, which is in contrast to the inch-deep and mile-wide strategy of other Defence players. In line with the Zen philosophy of less is more, the Company will continue to focus on training solutions. We have also developed some other products like ShootEdge that fulfil the operation needs of Special Forces. Application of AI techniques, including Adaptive Learning technologies in training solutions will help our customers learn smarter and faster.

The result of a proactive research-led investment approach is that Zen is among a handful of global companies that can provide holistic full-fledged cutting-edge solutions.

Governance

Zen recognises that it is engaged in a business where its principal customer is the government; it is in the critical business of combat readiness against internal and external threats that a country might face; the effectiveness of its solutions helps protect the lives of millions.

Over the years, the Company strengthened its governance through a long-term mind set, focus on processes and systems as the basis of its working, placing a premium on customer satisfaction and confidentiality, strengthening the technocrat-driven environment with extensive investment in research, investing in the quality-enhancing practices of its eco-system, strengthening its Board of Directors, protecting the integrity of its Balance Sheet and communicating its story transparently to the shareholders and other stakeholders.

Customer value

Zen provides value to the customer by stressing “to bleed less in war, sweat more in peace” by training. The value of Zen's combat training is beyond doubt. We understand from an officer that simulators bought from Zen for around ₹ 100 Crores resulted in the savings of about ₹ 3,300 Crores. But even after such savings Zen hasn't got as many orders as we would expect.

Integrated individual and team training is an indispensable requirement for all security forces. The right solution is a technology-driven Combat Training Centre solution that can be customised around specific customer needs. Zen provides a range of solutions for its customers – Indian armed forces, state police forces and paramilitary forces as well as their counterparts in other friendly countries. The result of our prompt service, sustained improvements, and continuous support provided through the product lifecycle is what customers prefer and why they engage with us on long-term basis. An unusual feature in a space generally very transactional by nature.

Global market

The push being provided by the Indian government continues to transform the opportunity landscape for Zen. The Company is actively engaged in many countries with large tickets size and chance of they engaging Zen for their training solutions - this is the result of a carefully thought out exports strategy. The vast exports potential is expected to yield some very large orders in the near future.



During the year under review, the wholly-owned subsidiary in US along with its CEO, Pratish Shah, continued to reach out to prospective customers across the US and its friendly countries. The response has been very encouraging and we expect some small orders to come our way as an auspicious beginning soon.

Zen India, continues to focus on the growing opportunities arising out of India, the Middle East, CIS and Africa. Besides, the Company is engaging with small countries where solutions like combat training centres are being welcomed and Zen intends to fill this niche. This will be achieved by providing superior technologies at a price point acceptable to customers. We are also looking at attractive financing options, including EXIM Bank, where the customer needs it. The Company will ride the wave of growing global credibility of Indian Defence vendors with active government support.

Indian market

Two significant changes that he single-handedly introduced in the Defence Procurement Policy of 2016 are Buy India (IDDM) and Make II initiatives. On the export front late Mr Parikkar, while inaugurating Foreign Defence Attaches conclave in Delhi, said that India was an erratic market and all indigenous defence equipment innovators should protect themselves by diversifying through exports. The policy set by him will take India into the position of leadership in the coming decade. Two-minutes of silence for the greatest Defence Minister that India ever had.

Consequent to the changes initiated by him, the government had relaxed the need for any equipment to have at least three vendors. The exception is when the Indian vendor has developed the intellectual property through in-house research, they are willing to buy through single-vendor situation; it is also receptive to innovative products being shown to the Indian forces. The Indian defence innovators are now slowly developing confidence in the system to invest in new product development and productisation. Research-driven, we have our strengthened a business moat through proactive investment in R&D.

The Company provides a family of more than 40 products and has filed more than 93 patents till date. These patents help us protect the R&D and help us in doing further research while helping us address the training needs of an army and internal security forces comprehensively. The Company's research commitment was validated through an investment of ₹ 65 cr+ across five years (around 20% of revenues) ending 2018-19, a period when the sectoral cycle was relatively depressed.

IP-Play

The world of products is divided into pure hardware to pure software. By pure hardware, I mean, hardware with no IP content, like nuts and bolts, where the bill of materials is almost equivalent to the selling cost. The margins in it are very very slim. And then take cloud-based software on the other end, where the bill of materials and true

variable costs are almost zero, and the sales are all contribution. Zen is attractively biased towards the software end of the spectrum. Most of the hardware that we need to supply to the customers, though designed and prototyped in-house, is outsourced for manufacturing. Therefore the plant & machinery investment required for incremental orders is almost non-existent. Over the years, the Company has strengthened its business around such asset-lightness. This approach makes it possible to ramp up its production with reasonable flexibility without a corresponding increase in the capex. The Company's business growth has been facilitated by a robust eco-system of component and sub-system vendors in and around Hyderabad. More than 85 per cent of the Company's manufacturing functions can be outsourced, transforming a fixed cost into a variable expense. Besides, this dependable eco-system possesses adequate spare capacity, making it possible for the Company to accept large orders while protecting customer schedules.

Annuity revenues

Our niche market is distinguished by its lumpy revenues. At Zen, we recognise that such lumpiness can severely impact company's liquidity when order inflows are low. Over the years, the Company strengthened revenues derived from annual maintenance contracts. These AMC contracts provide the Company with annuity revenues derived from product sales made in the past. While only a subset of customers enter into AMC contracts, they can potentially generate revenues equivalent to around 120 per cent of the initial product sales value generally extended across a 10 to 15 year horizon. The Company is progressing towards a critical mass of AMC revenues to adequately cover the fixed costs to sustain. In addition, we at Zen have been relentless at eliminating unnecessary costs and spending more on profit generating expenses.

Optimism

The global addressable market of more than USD 8 bn on the one hand and a relatively low supplier presence because of huge entry barriers provide a large sustainable business opportunity. As the world invests more in training and preparedness, preferring eco-friendly and effective methodologies over crude and environment destructive training methodologies, the market for our products will only increase.

While the performance of the company for FY19 has been adequate, we expect the numbers of FY20 to far outstrip this performance, both in terms of top-line and bottom-line. And based on the sales funnel, and the aggressive promotion of Indian defence industry by the Govt of India, we expect the coming years to be the best for Zen. And, as usual, we tend to put our money where our mouth is.

Ashok Atluri

Chairman and Managing Director
Zen Technologies Limited

CORPORATE INFORMATION

CIN	L72200TG1993PLC015939
Board Of Directors	<p>Mr Ashok Atluri (DIN: 00056050) - Chairman and Managing Director</p> <p>Mr Midathala Ravi Kumar (DIN: 00089921) - Whole Time Director</p> <p>Mr Venkat Samir Kumar Oruganti (DIN: 06699271) - Independent Director</p> <p>Ms Madati Sridevi (DIN: 02446610) - Independent Director</p> <p>Mr Amreek Singh Sandhu (DIN: 08064880) - Independent Director</p> <p>Dr Ravindra Kumar Tyagi (DIN: 01509031) - Independent Director (Co-opted w.e.f. April 01, 2019)</p>
President	Mr Kishore Dutt Atluri
Chief Financial Officer	Mr Ravi Kiran Mallela (Appointed w.e.f. February 01, 2019)
Company Secretary	<p>CS M Satish Choudhury (Resigned w.e.f. July 09, 2019)</p> <p>CS Hansraj Singh Rajput (Appointed w.e.f. August 3, 2019)</p>
Registered Office	<p>B-42, Industrial Estate Sanathnagar, Hyderabad-500018, Telangana, INDIA CIN: L72200TG1993PLC015939 Phone: +91- 40 - 23813281, 23812894 Fax: +91- 40 – 23813694 Email id: info@zentechnologies.com Website: www.zentechnologies.com</p>
Statutory Auditors	<p>M/s. Sekhar & Co., Chartered Accountants Hyderabad (Resigned w.e.f. June 28, 2019)</p> <p>M/s. Ramasamy Koteswara Rao and Co LLP. Chartered Accountants Hyderabad (Appointed w.e.f. June 28, 2019)</p>
Secretarial Auditors	<p>M/s. P. S. Rao & Associates Company Secretaries Hyderabad</p>
Banker	<p>Indian Bank State Bank of India</p>
Registrar and Share Transfer Agents	<p>Karvy Fintech Private Limited (formerly known as Karvy Computershare Private Limited) Unit: Zen Technologies Limited Karvy Selenium Tower B, Plot No 31 & 32, Gachibowli, Financial District, Nanakramguda, Serilingampally Mandal, Hyderabad – 500 032 Phone: +91 -40 - 67161605 Fax: + 91- 40 - 23001153 Email id: einward.ris@karvy.com</p>
Listed With	<p>BSE Limited, Mumbai (BSE) National Stock Exchange of India Limited, Mumbai (NSE)</p>



BOARD COMMITTEES

Audit Committee	Mr Amreek Singh Sandhu	-	Chairman
	Mr Venkat Samir Kumar Oruganti	-	Member
	Mr Ashok Atluri	-	Member
	Ms Madati Sridevi	-	Member
	Dr Ravindra Kumar Tyagi	-	Member
Stakeholders Relationship Committee	Mr Venkat Samir Kumar Oruganti	-	Chairman
	Mr Ashok Atluri	-	Member
	Ms Madati Sridevi	-	Member
Nomination and Remuneration Committee	Mr Venkat Samir Kumar Oruganti	-	Chairman
	Mr Amreek Singh Sandhu	-	Member
	Ms Madati Sridevi	-	Member
Corporate Social Responsibility Committee	Ms Madati Sridevi	-	Chairperson
	Mr Ashok Atluri	-	Member
	Mr M Ravi Kumar	-	Member
Risk Management Committee	Mr Ashok Atluri	-	Chairman
	Mr M Ravi Kumar	-	Member