



being there...

ZEN TECHNOLOGIES LIMITED



Investor Presentation

April 2018

BSE: 533339 | NSE: ZENTEC | ISIN: INE251B01027 | CIN: L72200TG1993PLC015939

WWW.ZENTECHNOLOGIES.COM

© Zen Technologies Limited – All Rights Reserved.

Contents



1	Company Snapshot	3
2	Key Milestones	4
3	Technocrat Management	5
4	Business Model	10
5	Competitive Edge	11
6	Combat Training Centre	16
7	Financial Overview	20
8	Growth Drivers	26

Zen: Snapshot



**Simulators & Defence
Training Solution Player**



**R&D Driven
Products**

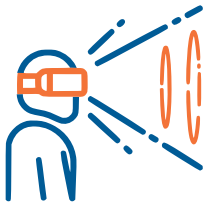


**Net Debt Free
Balance Sheet**

BSE NSE



**Listed On
BSE and NSE**



**Installed Base of
825 Simulators***



**Defence Customers -
Indian Armed Forces, State
Police Forces & Para
Military Forces**

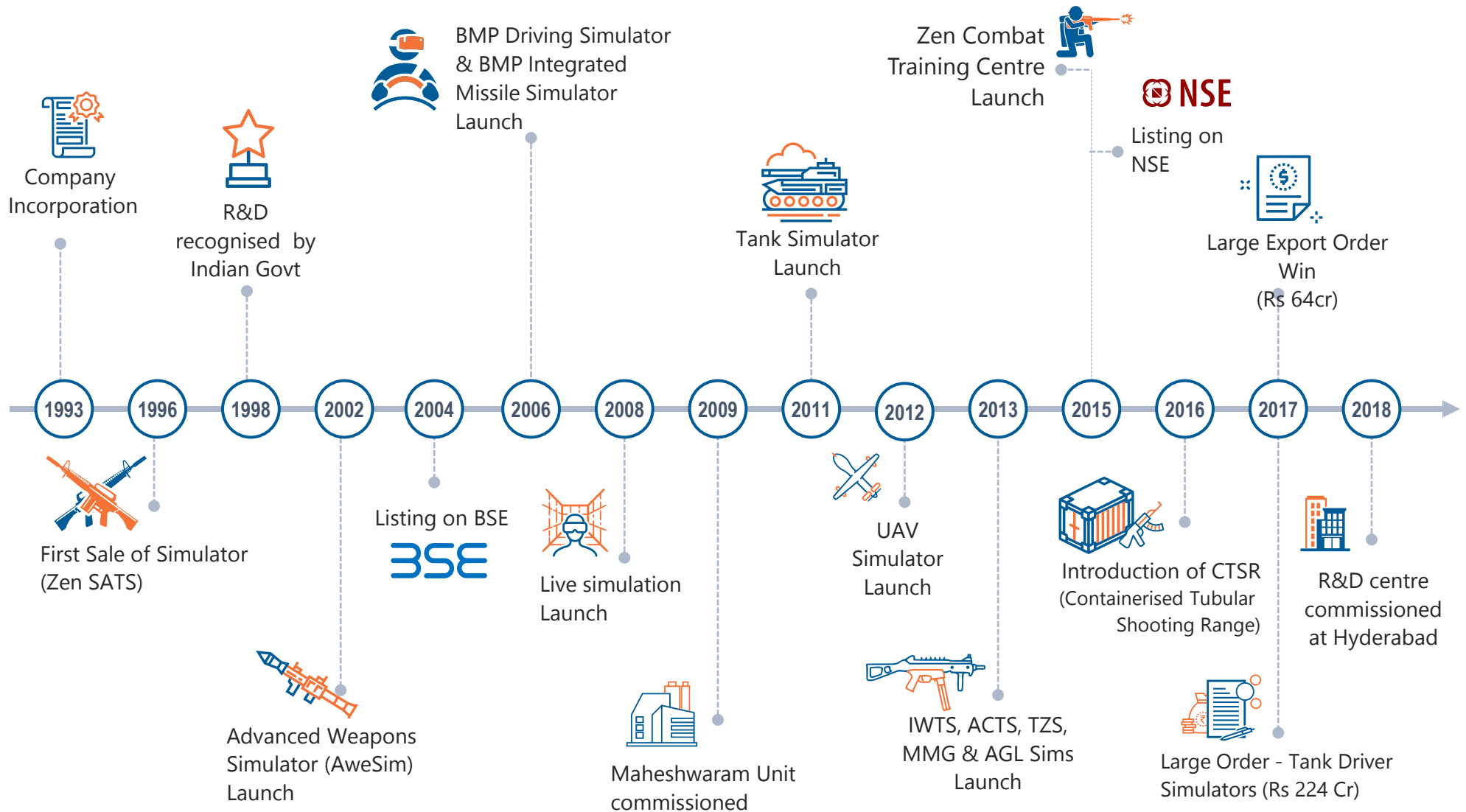


**Largest Order
Win - Rs 224 Cr
in Dec 2017**



**Pending order Rs 352 Cr
book ***

Milestones



Management Team



Mr. Ashok Atluri (*Chairman and Managing Director*)

Ashok is a post-graduate diploma holder in Applied Computer Science from CMC and has done his commerce graduation from Badruka College, Osmania University. He is the Co-Chairman of Defence Innovators and Industry Association. He is also an active member of the Young Presidents' Organization (YPO). He has been responsible for driving strategy and ensuring cutting edge R&D has led to the development of state-of-the-art import substitute simulators for the Defence and Homeland forces.



Mr. Kishore Dutt Atluri (*President*)

Kishore is a post graduate in Computer Application from University of Hyderabad, started his career with private organization in 1986. He is the brain behind Zen's range of products, including Small Arms Training Simulator, Advanced Weapons Simulator, Driving Training Simulator, 81mm Mortar Simulator, BMP II Integrated Missile Simulator, Mining Equipment Training, Simulator, which cater to the needs of Police Forces, Central Police Organization, Civilian and Miners.



M. Ravi Kumar (*Whole Time Director*)

Ravi has over 20 years of experience in software industry. He is a technocrat and an expert in Systems programming and Robotics. As head of R&D division he is actively involved in design and development of the present range of simulators at Zen.



Mr. H J Kamath (*Sr Vice President*)

He is a graduate in Electronics from IIT Madras and a Post Graduate in Management from IIM Calcutta. Mr. Kamath has been CEO, Mahindra Telephonic Integrated Systems, where he was responsible for setting up a green field facility to manufacture air borne radar systems, surveillance and communication systems. Earlier he was associated with CAE India as Director Sales & Marketing and Macmet Technologies Ltd as Director & CEO.

Management Team



Air Vice-Marshal (Retd) Arvind Verma

Air Vice-Marshal Arvind had an illustrious career, spanning 37 years, with Indian Air Force. He was deeply involved in management of Geo Spatial and Geo Intelligence resources, conducting strategic war games of national and international conflict. He is currently advising Zen on Aviation initiatives and deeply involved in exports growth.



Brigadier (Retd) Amul Asthana (Vice President Projects)

Brig Amul has a Master of Science (Military Studies). He has 34 years of military experience specially related to weapons, equipment and related projects. One year of projects experience in Zen Technologies Limited; related to Firing Ranges-Outdoor, Indoor, Containerised, Shoot House and related domains of target, safety, environment and range control systems.



Col (Retd) Abhishek Agnihotri

Col Abhishek is a post Graduate from Pune University (M Sc (Tech), Weapon Systems with over 25 plus years (21 Years in the Indian Army) of cross- functional experience, expertise & leadership. He has worked as a consultant in the arena of defence manufacturing, offsets, strategic planning and tie-ups with foreign OEMs. He is currently leading the Zen exports efforts.



N Ramesh Kumar (CFO)

Mr N Ramesh Kumar is a qualified Member of the Institute of Cost Accountants of India and a Member of Institute of Company Secretaries of India. He holds a Bachelor's degree in Law and Master's degree in Business administration. He has over 20 years of rich experience in Finance, Accounts and Corporate Secretarial matters.

Armed Forces Training Needs



Objective Assessment &
Benchmarking of Preparedness



Soldiers Need Continuous
Training for Operational
Preparedness



Increasing Global Conflicts &
Terrorist Activities Requiring
Specialised Training



Elaborate Infrastructure
for Training



Difficulty in Creating Scenarios
for Training: Hostage Situations,
War Fronts

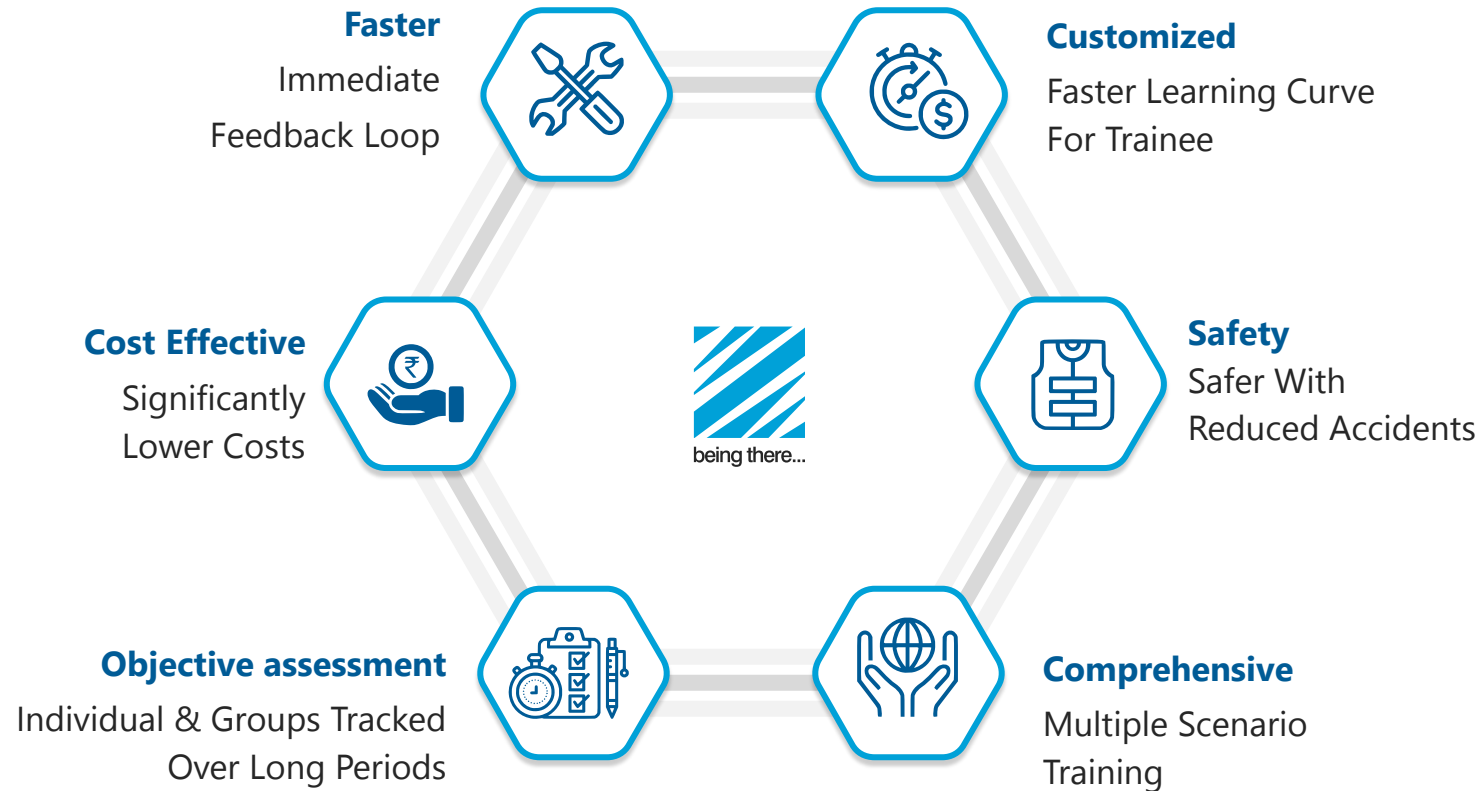


Need to Reduce
Civilian Casualties



Increased Role of Technology in
Modern Warfare

Advantage Simulators



Large Opportunity Size



Combat Training Centre

- Handful of companies globally
- Large value add to the forces with simulated war-games / large scale joint exercises
- Potential order size of USD 50-100 million for a single installation



Indian Army training requirement of 8000 Cr



Global addressable market size of more than USD 8 billion



Large installed base with AMCs – significant recurring income



Abundant Export Opportunities

- Operational Preparedness Increasingly Important in Europe, Middle East and Africa
- Cost of Advanced simulators very prohibitive in Africa and Middle East
- Smaller markets which are ignored by larger established players
- No ITAR restrictions on Exports
- Growing credibility of Indian Defence Vendors with active government encouragement
- Zen signed two large export orders (Rs 90 Cr)

- Pioneering Defence Training Solution Provider
- Balancing the product and services business mix
- Exports to further diversify revenue base
- AMCs revenues to hit a level where company is profitable even in absence of new equipment orders

Revenue Drivers

Simulator Products



- Orders are of large size and have long closing cycles resulting in revenue volatility
- First mover advantage with many soldiers having trained on company's products



Combat Training Centre (CTC)

- Combat Training Centre as a highly advanced & tailored training solution would enable deeper penetration and longevity of relationship



Annual Maintenance Contract

- Long term recurring income with high margins
- Lifecycle of a simulator is 15 years creates lifetime revenue potential of 120% of product sale
- Growing recurring income as simulator installation base increases



Exports

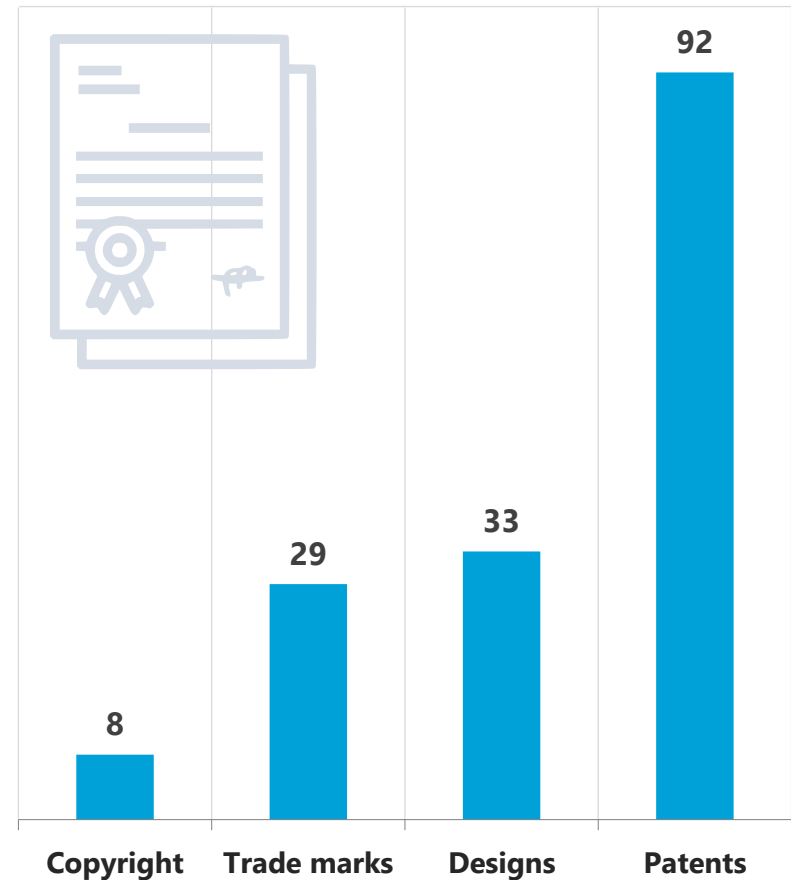
- Large export order win in 2017 (30 Cr + 64 Cr)
- Focus on sales to underserved markets of Middle-East and African countries
- Focus on developed market sales with a sales team in US



Focused R&D driven organisation

- R&D Driven prototyping to develop state of the art training simulators
- Over 90 in-house researchers with specialised domain knowledge
- Collaboration with universities to further augment research capabilities
- R&D spend of over 65 crs in the last 5 years, ~24% of revenues
- Significantly shortened lead time in developing new simulators with a databank of extensive simulation modules
- Filed 92 domestic and global patents applications of which 23 granted

Total IPR Application



Zen Technologies Competitive Edge



Comprehensive product range

- More than 30 simulator products for varied training needs
- Comprehensive Customised Training solutions with Combat Training Centre



Credibility with two decade old track record

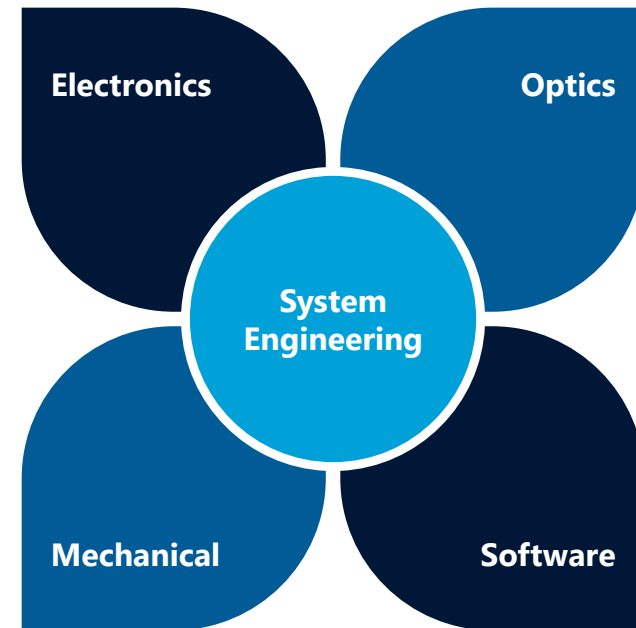
- Great understanding of Indian defence procurement process
- Good insight into the potential pipeline and armed forces pain-points
- Great credibility within the Indian Forces having supplied over 825 simulators over the last 2 decades
- Over 90% of Indian business is from repeat customers



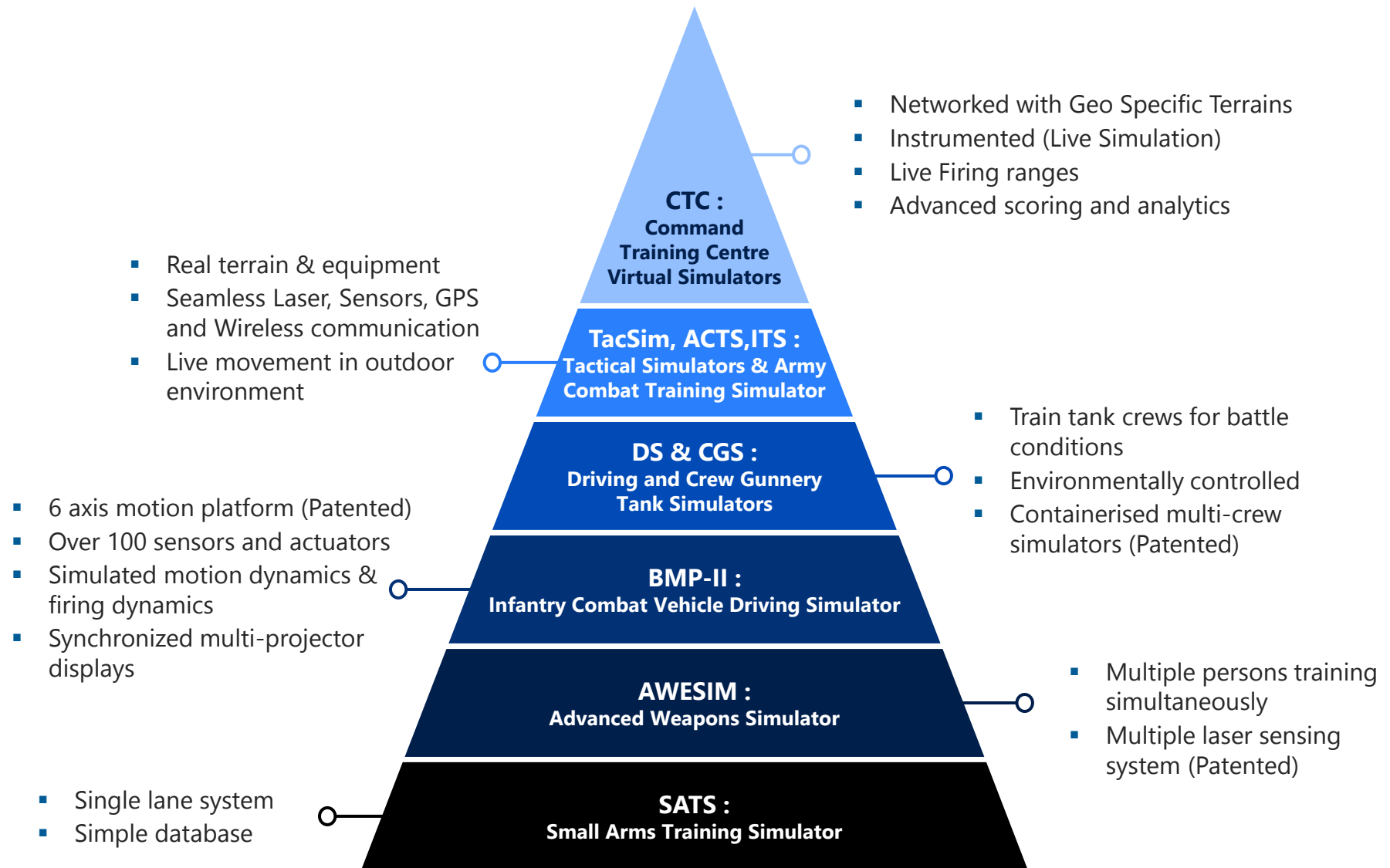
Best-in-Class Sales Support

- 23% of workforce in after sales support
- Excellent feedback ratings
- Over 99% Uptime of product installations in AMC

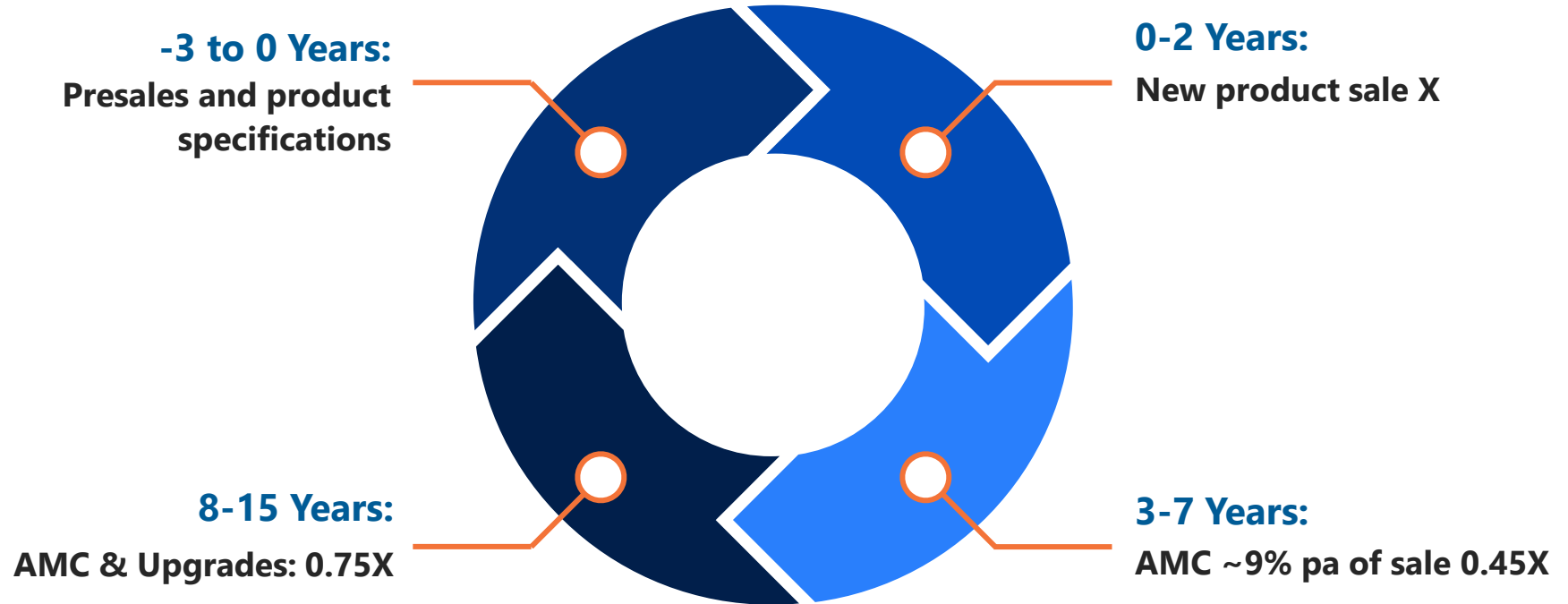
Complete in-house skills



Moving Up The Complexity Pyramid



Simulator Life Cycle



Simulator sale of X creates a future revenue potential of 1.2X over the product life

Simulator Product List



Defence

- 81mm Mortar Integrated Simulator
- Advanced Weapons Simulator
- Air-to-Ground Firing Range Scoring System
- Anti-Aircraft Air Defence Simulator
- Anti-Tank Guided Missile Simulator
- Armour Combat Training System
- Artillery Forward Observers Simulator
- Automatic Grenade Launcher Simulator
- BMP II Driving Simulator
- BMP II Integrated Missile Simulator
- Carrier Mortar Tracked Simulator
- Combat Training Centre
- Combat Training Simulation System
- Containerised Shooting Range
- Containerised Tubular Shooting Range
- Driver Aptitude Testing System
- Driving Training Simulator
- Hand Grenade Simulator
- Infantry Weapons Training Simulator
- Master Control Station for Live-Firing Ranges
- Medium Machine Gun Simulator
- Multi-Functional Target System
- Rotary Wing Simulator
- ShootEdge®
- Shoot House for Live and Simulated Indoor Tactical Training
- Small Arms Training Simulator - SL
- Smart Target System
- Tactical Engagement Simulator (TacSim®)
- TacSim® with Indoor Tracking System
- 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
- Tank Zeroing System
- UAV Mission Simulator
- War Gaming Solutions

Homeland Security

- 81mm Mortar Integrated Simulator
- Advanced Weapons Simulator
- Air-to-Ground Firing Range Scoring System
- Artillery Forward Observers Simulator
- Automatic Grenade Launcher Simulator
- Carrier Mortar Tracked Simulator
- Combat Training Centre
- Containerised Shooting Range
- Containerised Tubular Shooting Range
- Driver Aptitude Testing System
- Driving Training Simulator
- Hand Grenade Simulator
- Master Control Station for Live-Firing Ranges
- Medium Machine Gun Simulator
- Multi-Functional Target System
- Robotic Targets
- Rotary Wing Simulator
- ShootEdge®
- Shoot House for Live and Simulated Indoor Tactical Training
- Small Arms Training Simulator - SL
- Smart Target System
- Tactical Engagement Simulator (TacSim®)
- TacSim® with Indoor Tracking System
- UAV Mission Simulator

Driving

- Automated Driving Simulator
- Basic Driving Simulator
- Bus Driving Simulator
- Driving Training Simulator
- Driver Aptitude Testing System
- Tatra Driving Simulator

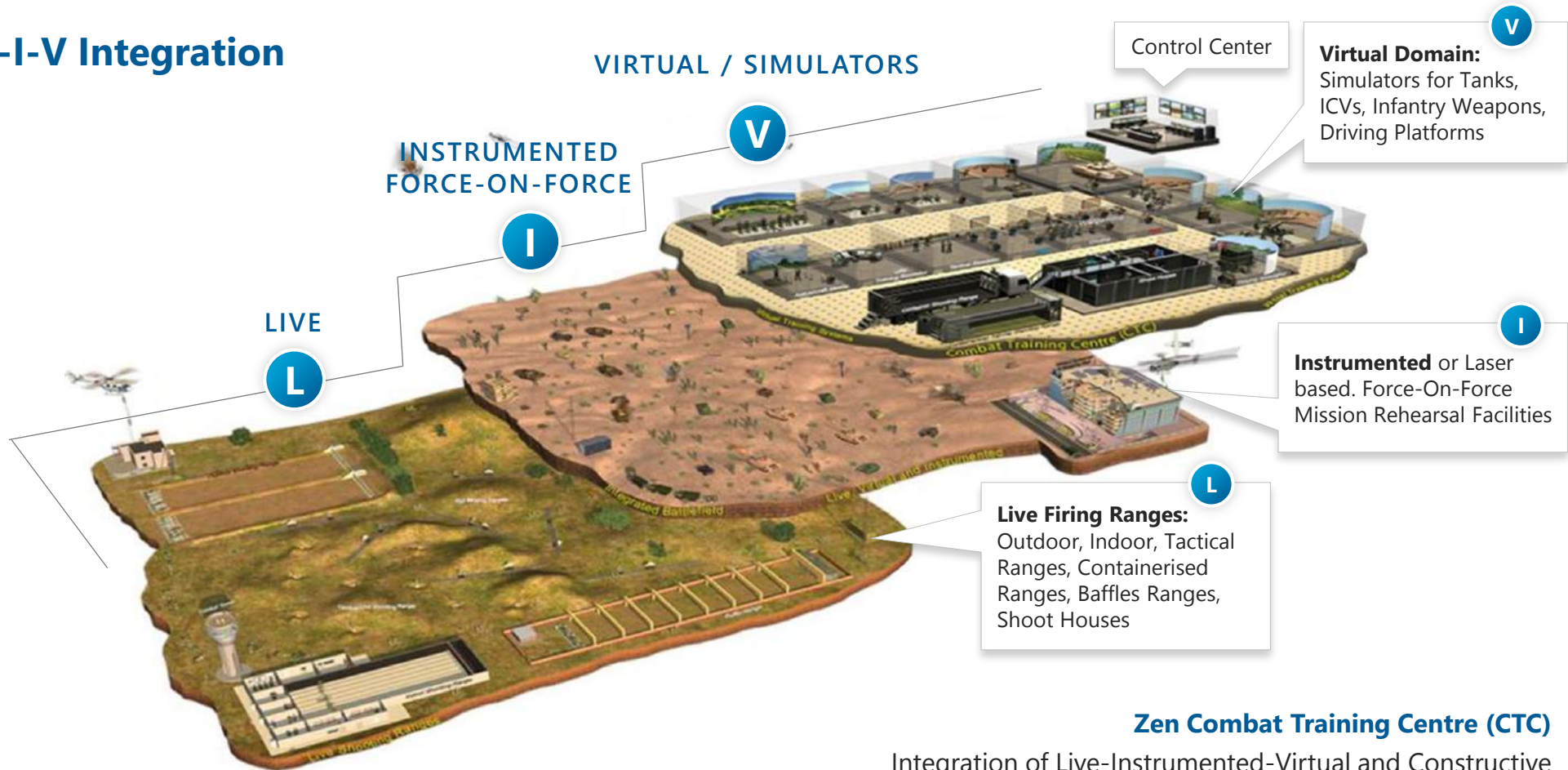
<http://www.zentechnologies.com/training-simulators-equipment-systems.php>

Zen CTC: One Stop Solution for higher Combat Readiness



- Designed, developed and maintained by Zen Technologies at user site
- Customised Modules as per training requirements and specifications from user

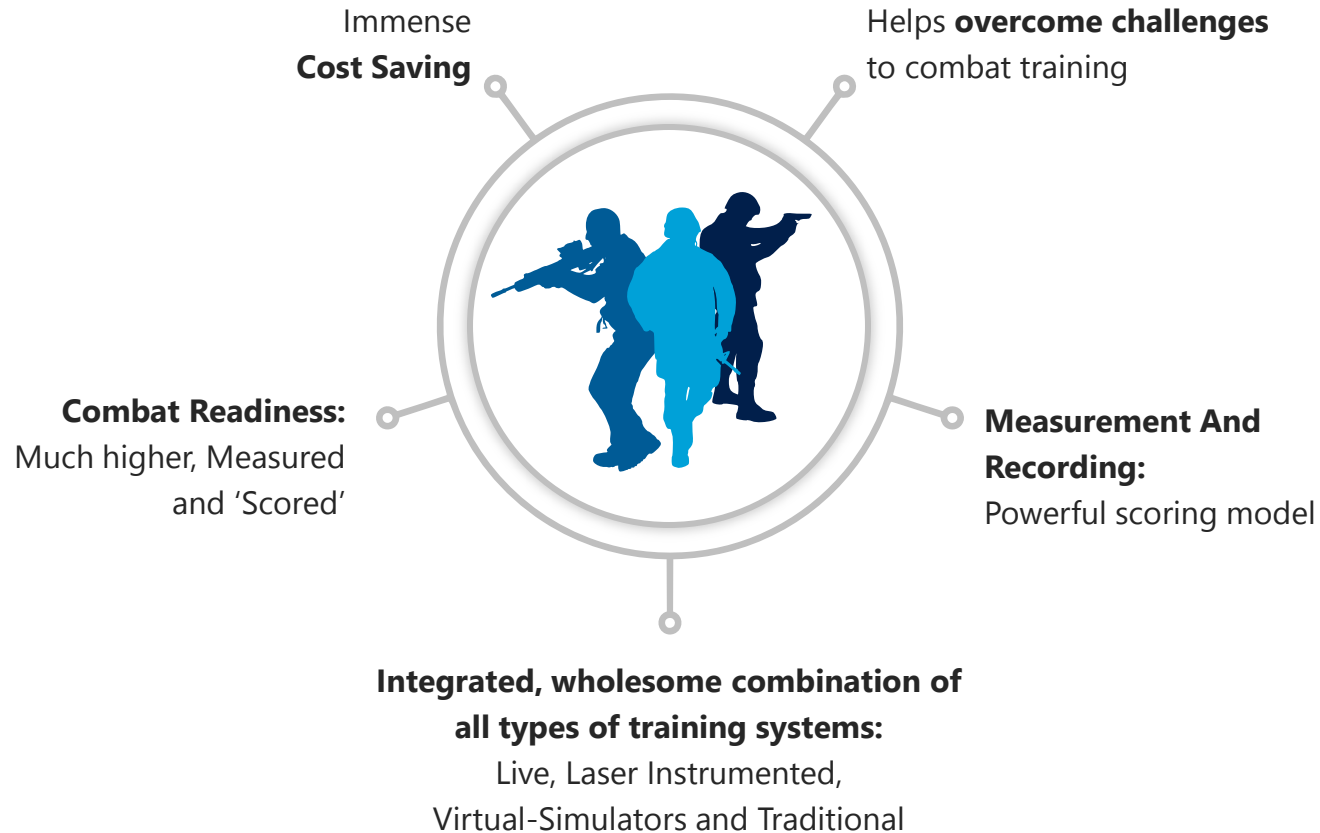
L-I-V Integration



Zen Combat Training Centre (CTC)

Integration of Live-Instrumented-Virtual and Constructive Simulation into a **Common Operating Picture**

Zen CTC: One Stop Solution for higher Combat Readiness



Facilities



Corporate Head Office

27,000 Sq. Ft.

B-42 Industrial Estate,
Sanath Nagar, Hyderabad

Production Division

75,000 Sq. Ft. built up on 8.55 acre land

Hardware Park,
Maheshwaram, Hyderabad



New R&D centre

25,000 Sq. Ft.

Floor No.11 and 12, Signature Towers,
Kondapur, Hyderabad

Testimonials



Armed Forces Regiment

"It gives me immense pleasure to write about your prompt action and quality service provided by your highly trained and professional representative for providing service of T-90 basic and crew Gunnery Simulator. "

" The Gunnery simulators are of great help as it provides real time firing practices to our crew and also provide regular practice to new gunners joining the Regiment. "



Army Training Academy

" Multi-functional target system (Zen MFTS) helps us to prepare trainees for real-life situations through its standard and complex exercise of Reflex shooting with live fire. "



Special Forces

"Zen AWeSim has been working satisfactorily under the maintenances of Zen Technologies ltd. It has been very useful for training purpose and helps the trainees to attain perfection in weapon handling and weapon firing."



Armed Forces

"The Zen Advanced Weapon Simulator, installed and commissioned by Zen Technologies limited, Hyderabad, has been functioning well and helping officers and sailors to improve their shooting skills in Tactical and Judgmental scenarios. "

" The System is user-friendly as it is loaded with 3D targets and video based maritime scenarios. The system also allows trainees to train with different types of weapons and fire at moving targets."

" Zen service engineers are prompt in their after-sales service and have ensured the system is training worthy. "

Figures in INR Millions

	2013	2014	2015	2016	2017	9M FY2018
Sales	371.1	463.5	785.5	526.1	616.5	255.9
Sale of Products	335.9	432.6	715.3	425.3	486.7	109.6
Sale of Services	35.3	30.9	70.2	100.8	129.8	146.3
Gross Profit	281.2	341.5	542.1	378.7	494.5	222.6
R&D Expenses	91.65	148.55	130.7	142.96	127.24	75.2
EBITDA Excl R&D	205.5	248.2	372.7	239.00	276.94	70.95
PAT	47.0	0.9	157.4	23.2	71.7	-38.4
Total Order Book	10.0	40.0	1,190.0	760.0	740.0	3,530.0
AMC Order Book	0.0	10.0	790.0	760.0	700.0	1,260.0

Balance Sheet



Figures in INR Millions

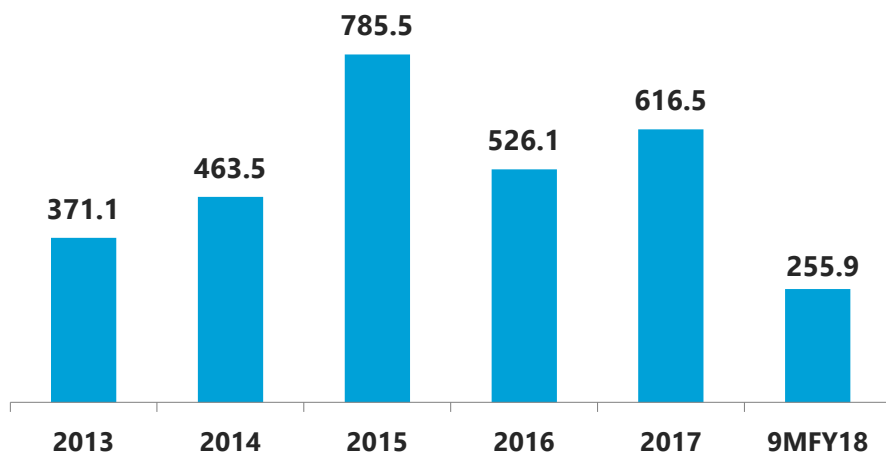
	2013	2014	2015	2016	2017	Sep 2017
Net Worth	1,073.2	985.6	1,110.5	1,124.4	1,196.1	1,140.6
Long-Term Borrowings	18.5	44.4	36.8	77.6	58.0	42.9
Short-Term Borrowings	102.7	124.8	348.2	295.0	21.6	227.0
Trade Payables	13.0	20.9	31.2	20.9	30.7	13.4
Fixed Assets	272.8	438.7	440.6	431.2	446.4	440.8
Capital Work-in-Progress	29.0	10.4	3.1	147.2	166.9	184.0
Inventories	52.1	98.5	150.2	97.9	79.2	87.0
Trade Receivables	129.1	114.6	594.9	80.6	203.5	254.3
Cash and Cash equivalents	466.2	420.2	376.4	679.7	342.1	302.4

Financial Details



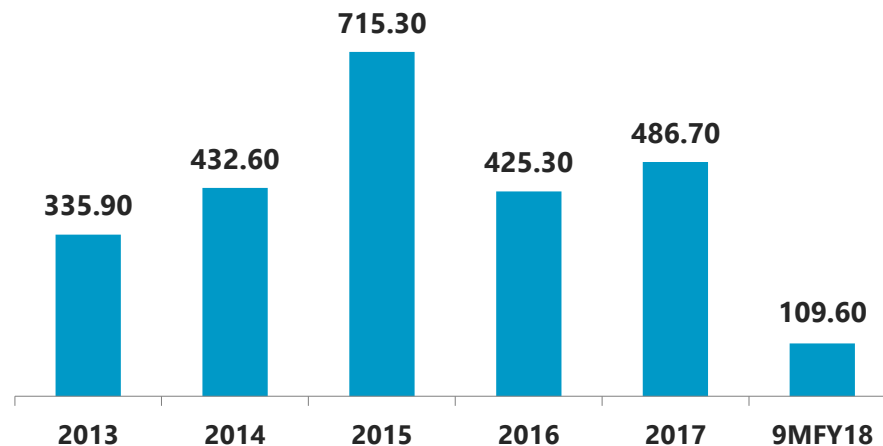
SALES

Figures in INR Millions



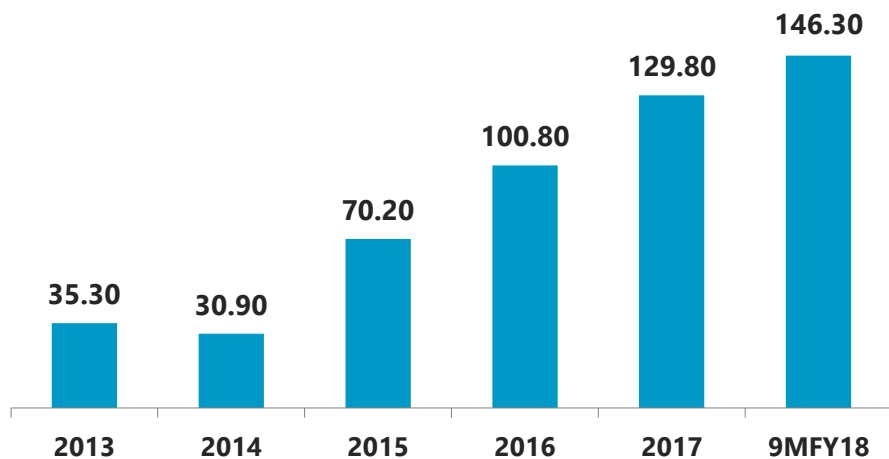
SALE OF PRODUCT

Figures in INR Millions

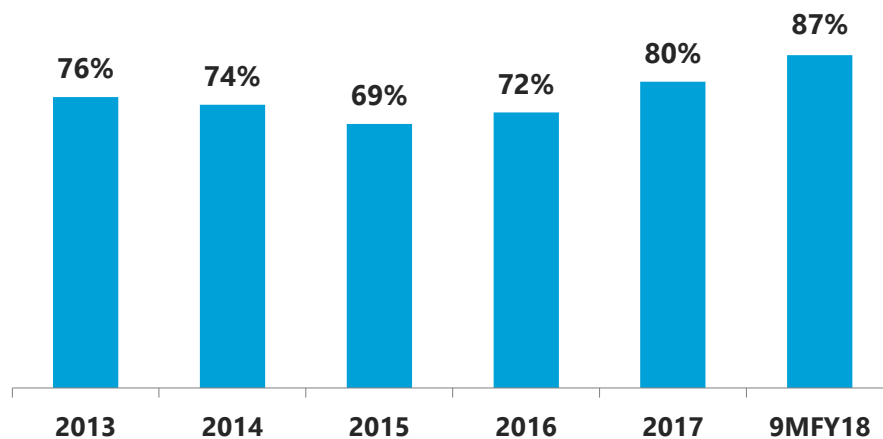


SALE OF SERVICES

Figures in INR Millions



GROSS MARGINS

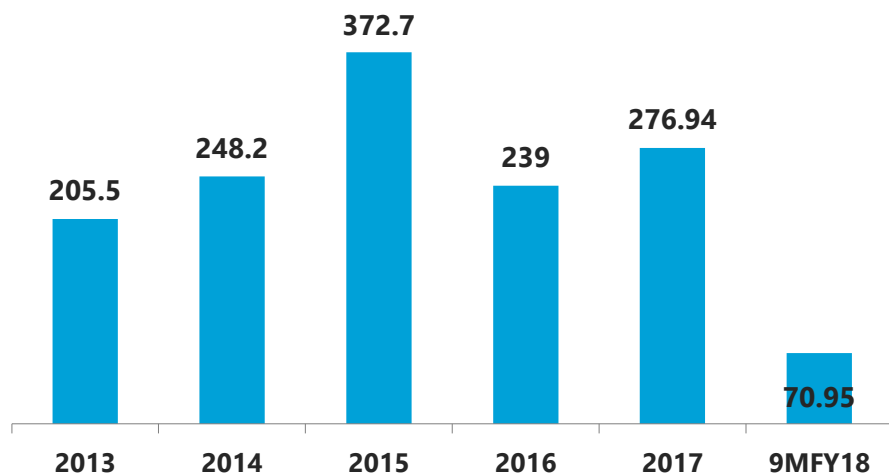


Financial Details



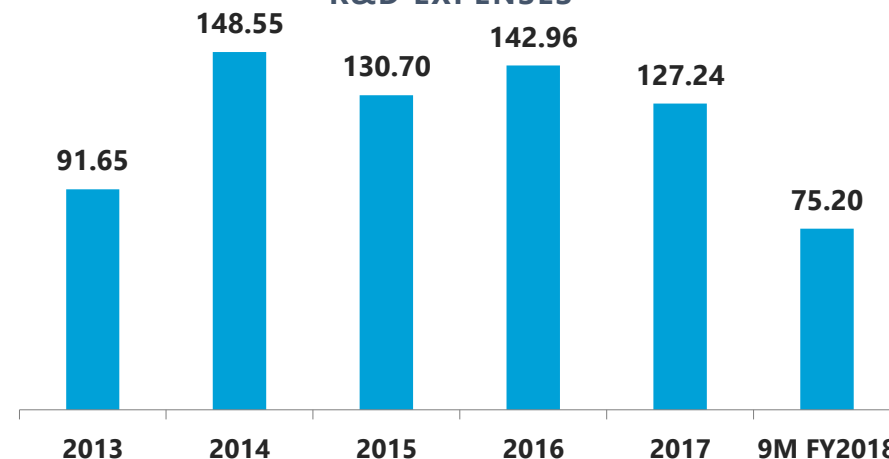
EBITDA EXCLUDING R&D

Figures in INR Millions



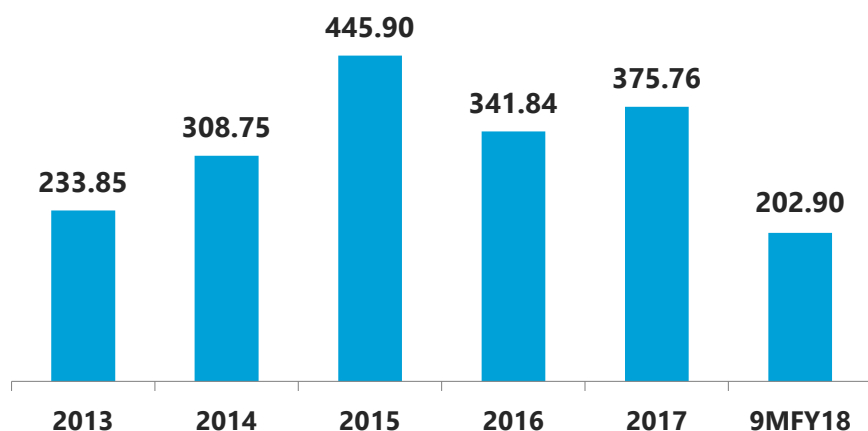
R&D EXPENSES

Figures in INR Millions



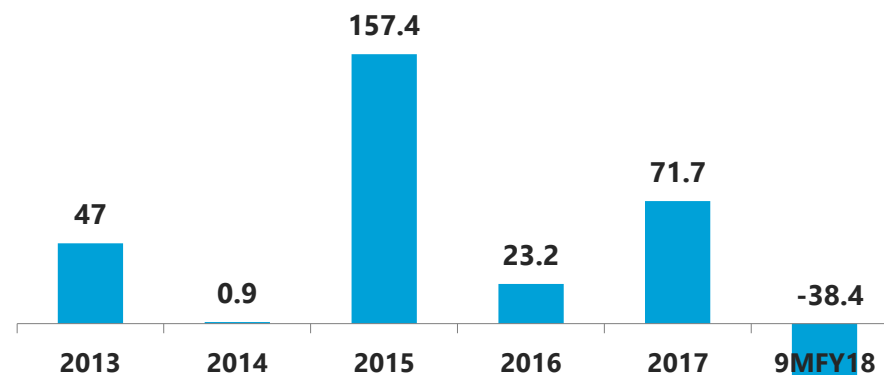
OPERATING EXPENSES EXCLUDING R&D

Figures in INR Millions



PAT

Figures in INR Millions

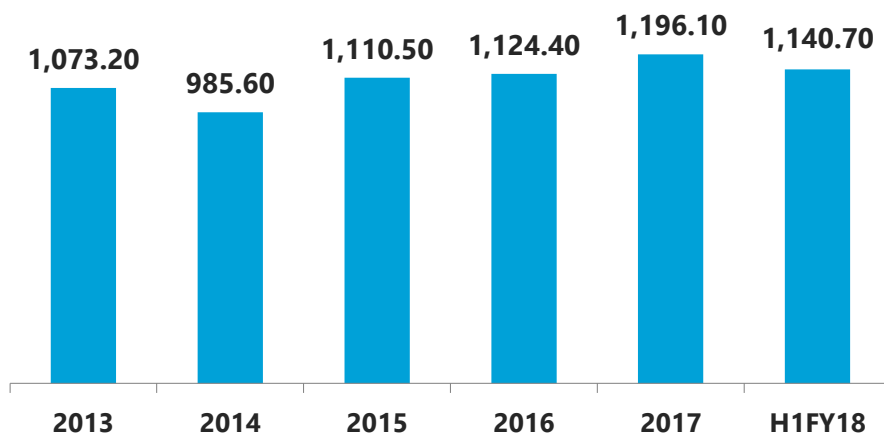


Financial Details



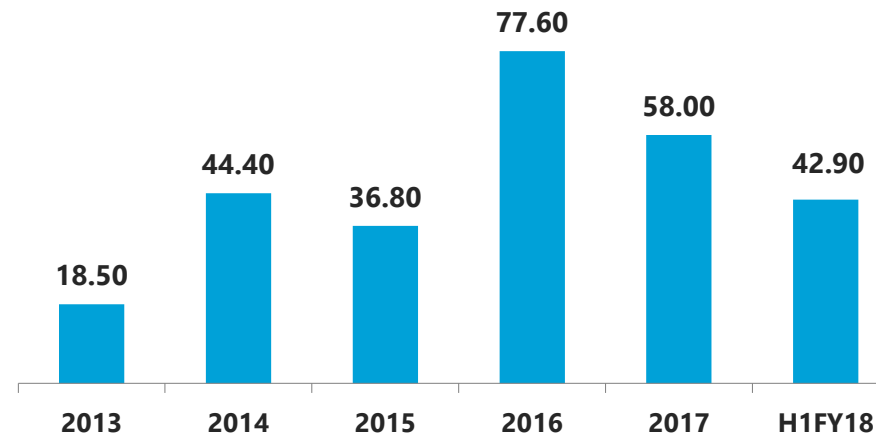
NETWORTH

Figures in INR Millions



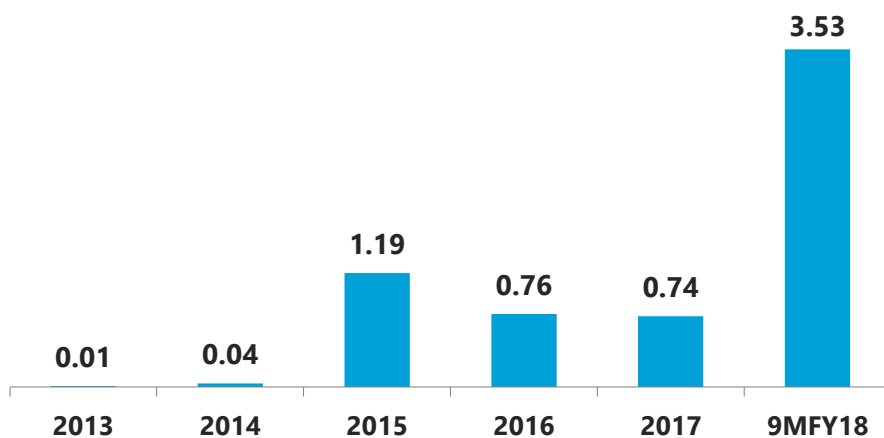
LONG TERM DEBT

Figures in INR Millions



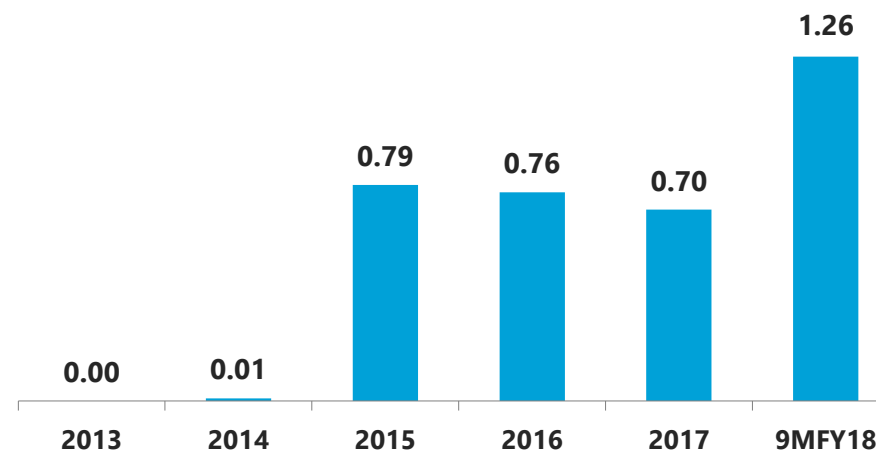
TOTAL ORDER BOOK

Figures in INR Billions



AMC ORDERBOOK

Figures in INR Billions



MAKE II procedure in the DPP 2016

- Industry can suo moto come up with solutions which can solve or address the challenges faced by Indian Army
- For accepted solutions the Indian armed forces will give a go ahead to develop such a system
- Indian armed forces will assure the acquisition of such system as a single vendor
- Developer will have to incur the cost of development

Make in India

- Government of India's keen focus on promoting indigenous manufacturing has created conducive environment to make in India for exports
- Offset clauses require global defence players to partner with Indian manufacturers

Indigenously Designed, Developed and Manufactured

- New Category introduced by MoD in DPP 2016:
- Under IDDM even Single vendor situations are accepted this opens up several erstwhile closed opportunities.
- Govt. to focus on IP ownership of products; not just low-cost coolie manufacturing done under licence

Growth Drivers



1

Domestic

- Conducive regulatory regime has opened erstwhile closed single vendor business opportunities
- Offset clauses require global defence players to partner with Indian manufacturers

2

Exports

- Target smaller erstwhile ignored markets through tailored training solution
- Dedicated marketing team to push sales
- Strong support from government vs approval hurdles in past.
- Products developed under Make II procedure can further be exported significantly enhancing the opportunity size
- Exploring setting up sales/ demo centres in Dubai & US

3

AMC

Annual Maintenance Contracts

- AMC CAGR of 38.5% over last 5 years
- Simulator sales leads to a potential 120% AMC revenue over product lifecycle
- Continued engagement with customers result in potential upsell opportunities.



ZEN TECHNOLOGIES LIMITED

For more information please contact:

CORPORATE

Satish Choudhury Meka
cosec@zentechnologies.com

INVESTOR RELATIONS

Siddharth (Kanav Capital)
siddharth@kanavcapital.com

Regd. Office: B-42, Industrial Estate, Sanath Nagar, Hyderabad, Telangana, India – 500018

Phone: +91-40-23812894, 23813294, 23814894, 23813281

Email: info@zentechnologies.com | www.zentechnologies.com

© 2018 Zen Technologies Limited., All Rights Reserved.

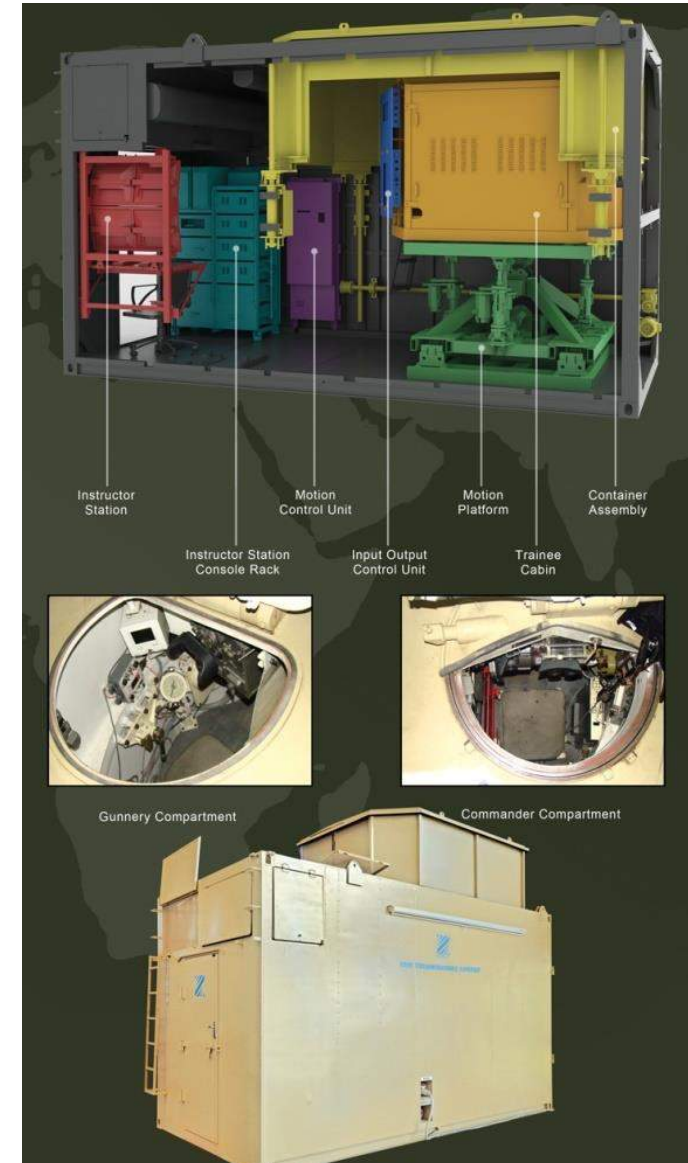
Zen Technologies Logo is a trademark of Zen Technologies Limited. In addition to Company data, data from market research agencies, Stock Exchanges and industry publications has been used for this presentation. This material was used during an oral presentation; it is not a complete record of the discussion. This work may not be used, sold, transferred, adapted, abridged, copied or reproduced in whole or in part in any manner or form or in any media without the prior written consent. All product names and company names and logos mentioned herein are the trademarks or registered trademarks of their respective owners.

Our Products

ZEN T-72 Tank Driving Simulator

Zen T-72 DS is a holistic driving simulator that provides several training features that enable skill development from basic to advance levels:-

- Day & Night Driving
 - Obstacle Negotiation
 - Trench crossing
 - Vertical obstacles (less than 1 mtr height)
 - Crossing of bridges including BLT laid bridges
 - Driving in desert terrains
 - Driving in built-up areas
-
- Driver compartment mock-up with all operational driver controls and display system
 - Patented 6 degree of freedom electric motion platform provides a realistic motion feel during driving through rotation and translation motion controls.
 - Visual and audio system softwares generates realistic visuals including smoke and dust generation.
 - Designed for quick integration with the gunnery simulator for Tank T-72 to enable integrated training of the Tank crew in combat situations.
 - Configured as a containerised simulator for easy transportation and start-up.
 - Zen recently received an order of 104 T72 & T90 driving simulators valued at 224crs.



Our Products



Containerized Tubular Shooting Range (CTSR)

- Zen Containerized Tubular Shooting Range (Zen CTSR) is a secure substitute for live firing range. It is self-contained, transportable and reduces considerably the area required for a range.
- Design of the tubular booth does not allow the fired bullets escape from it.
- Fire retardant materials have been used to ensure the range is safe for training
- The Range is available in a standard 40' container:
 - Allows firing in a standing and lying position with or without support
 - Projection systems that beams selected target, terrain and range on to the detection system.
 - Target system detects bullets' points of hits and displays them on Firing Point Equipment which is placed close to the firer.
 - Provides record-replay facilities for After Action Review



Advantages of CTSR

- Plug-and-Fire type; doesn't require construction of infrastructure, its maintenance and security-related issues
- Helps overcome logistics involved in outdoor shooting
- Cost-effective against indoor shooting ranges (building infrastructure and maintenance)
- Offers facility to fire at target ranging from 25 metres to 300 metres with the help of the application software
- Allows retrieving of fired bullets for recycling
- No adverse effect on surroundings



Our Products

ZEN TacSim

Zen TacSim facilitates outdoor tactical training in all types of terrains ranging from team/subunit participation to up to a Brigade size force.

Marksmanship/sniping skills, Battle Drills, tactics and other essentials required for armed interventions can all be practiced and perfected with TacSim equipment.

Instantaneously validate results of engagement between opposing forces and record all activities of the players needed for After Action Review.

Key advantages:

- Direct-fire simulation with highly accurate target hit—indicating kill, injury and near miss
- Combat target identification (Friend or foe)
- Online outdoor event/tracking reporting through Radio communication system
- Interactive simulation of area weapons like Artillery/Mortar fire, mines, IEDs and grenades
- Can function day-night, in high altitudes and in temperatures ranging from 5 to 40° C
- Capable of simulating firing effects of all Rifles, Carbines/SMGs, Sniper Rifle, LMG/GPMG/MMGs, HMGs/AMR, ATGMs, RL, MGL etc. Engagement of Tanks/IFV and other vehicles simulating destructive effect is possible by fixing vehicle harnesses embedded with laser sensors.



Smart Target System

Zen Smart Target System (Zen STS) is an outdoor, live-firing training system that detects point of hit on the target, counts the number of bullets fired and informs miss-hit and cross-fire.

STS is an acoustic based projectile detection system capable of measuring exact point of hit or miss on the target. The use of such a scoring system makes validation of firer's efficiency in a cost-effective way.



Zen CTC: One Stop Solution for higher Combat Readiness



24/7 Combat Readiness with Zen Training Systems

