iPLON Services – Training & Skill set Building

Sreenath C iPLON India Pvt Ltd #26/80,Luz Avenue, 5th Street, Mylapore, Chennai, Tamil Nadu, India 600 004



NHANNA AN ANNA MANA ANNA ANNA MANA ANNA ANNA

1

Agenda

- Aims (why and what motivation)
- About Solar-log and iPLON cooperation
- Business Case (AMC for PV rooftops & Utility Plants)
- Methods, Tools and Training (Web4 U)
- PV Doctors and PV Nurses
- Stakeholders and team building
- Next steps

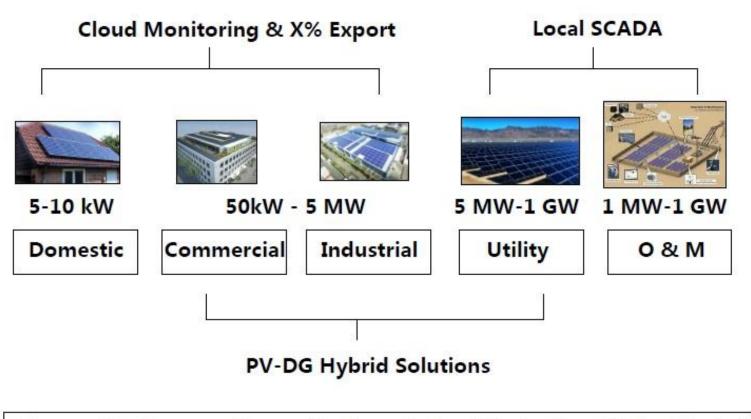


AMC for PV plants (kW to GW)



kW to GW PV Solutions





2 Innovative German Companies from Baden Wurtemberg(Solar Cluster) Cooperating(JV) for Solutions in Indian PV Industry

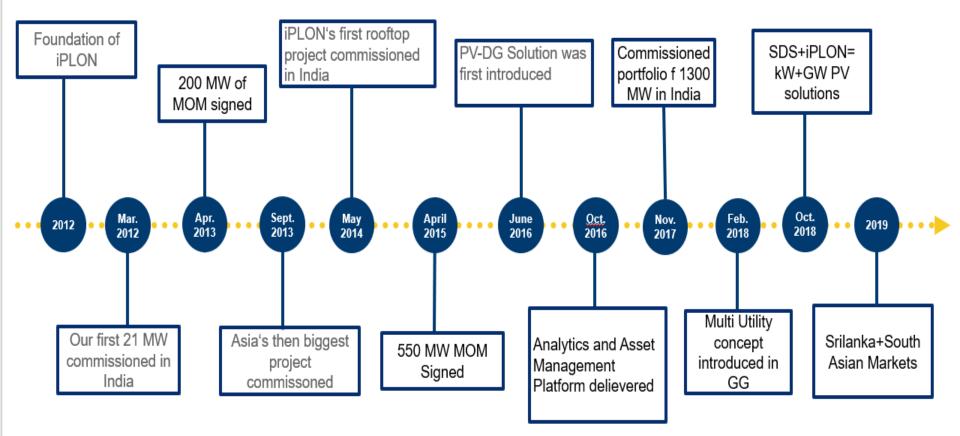
Anna Designi

in the providence source was the star

iPLON team- Chennai (Head office)

doc

iPLON's Milestones



a source of the second second second second second with the second second real and the formation of a second s

iPLON O&M solutions

iPLON®

- Local plant monitoring SCADA systems
- Power factor correction/control systems
- Forecasting services
- SLDC connectivity; OTA/Remote updates
- Customized reporting package
- Data sharing to PD/EPC/Govt. Agency
- Cloud based Analytics
- Predictive alarm generations
- Panel, Inverter degradation analysis
- User defined/customizable dashboards
- Benchmarking of multiple plants
- Birds eye view of complete portfolio
- Future of micro grid systems
- Ticketing with historical correlation
- Scheduling of Preventive maintenance
- Spare part management
- Break down call logs with RCA report
- Portfolio revenue reports
- Document Management System

SAN PARANA MANANA MA



11 days		Tickata	Kunderwerwaltung	Farritzenan Q			
Über	sicht		KURDEN ER BELDIG	r Berchtsvesen Q			
Erinter	ungs-1	Tickets					
Mairie g	Alperta	no Talieti (D) (1	teine beobachtelen 7ch	ets (0) Melline Verandepolicitization (0) Tickets in mellion Guinans (2) Alle Tickets (2)			
		ALTER	QUEUE	Y THEL	ISTATUS	T WARTEN BS	: CM#
-		JdBh	PV EPJ	EPJ_ES PUJOLS_whole plant no comm	on site service	22 08 2016 11 06 00	\$3107770
-	☆	6d1h	PV.FOR	FOR Forest Health IV-curve measurements on 23rd August	on site service	23 08 2016 10 00 00	13107476
Mairing		and Tardanta (1 a		ets (2) Marine Versetworkschlichkeiter (5) Tickets is meiner Garses (1932) Alle Tickets (2012)			12
		Chie	ALTER	THE	QUEUE	T AFFECTED COMPC	
-	*	Chie 13106707		11TEL SNA Super Nova storg check 24.08 2016	PV SNA	T AFFECTED COMPC	
:	**	Chie 13106707 13106706	AALTER 3 m 3 m	TITEL SNA Super Neva stirg check 24.08.2016 PV: Vihilland solar pak	PV SNA Labstalle	T AFFECTED COMPC	
Ξ	賣賣賣	Chie 13106707 13106706 13106706	ALTER 3 m 3 m 3 m	11TEL SNA Super Nova storing check 24.08.2016 PV: Vhilded solar park QCH Grant Clemhon string check 24.08.2016	PV SNA Lebitele PV-GGH	T AFFECTED COMPC	
Ē	***	Chill 13106707 13106706 13106706 13106703	ALTER 3 m 3 m 3 m 23 m	111EL BNA Suspen Neura asking check 24.08.2016 FVV: Vhillendt solar park GGH Orang Clematum strang check 24.08.2016 Alexes - ARA: reveal Astern (1-1-Asternic Institute) 1425.38.WV	PV SNA Lebitelle PV GGH PV ALR		
Ξ	賣賣賣賣賣	CBH8 13106707 13106706 13106706 13106703 13106703	ALTER 3 m 3 m 3 m 23 m 33 m	1918. SAA Super Nova sking clock 24 09 2016 PVV Unbind visit gak. Old Gran Gland Smithen sing clock 24 09 2016 Xilani - XRF - near Alamse (1) - Aktariki Kantargi 1422/33 MV BON Rova & Comm NY 1563-70 ac comm	PV. SNA Lebitelle PV. GOH PV. ALR PV. RCN	* APPECTED COMPC	
-	黄黄黄黄黄黄	Chi# 13100707 13100706 13100706 13100706 13100702 13100702	*ALTER 3 m 3 m 23 m 23 m 33 m 30 m	1918. SNA Dager Nice asting check 24 05 2016 PVC VMilled state park GOIT Oran Glenhan string check 24 08 2016 Near-ART, energy Marken (L-Aktudie Lestungs 1425 31 N/V ECIK Stock Check Berland Shortschult platt to carem	PV SNA Lebstelle PV GGH PV ALR PV ALR PV MCDK		
i	黄黄黄黄黄黄	Chi# 13100707 13100706 13100706 13100706 13100702 13100702 13100701 13100659	▲ALTER 3 m 3 m 23 m 33 m 33 m 33 m 53 m	1015. Side Stape Hous allog (sells 2.0.0.2014 FW, When allow allow gales Side Stape Sta	PV SNA Lebstafie PV GGH PV ALR PV ALR PV RCN PV SICIUE PV 105	Inveter	
-	黄素素素素素素素	Chie 13108707 13108706 13108706 13108706 13808702 13808702 13808699 13808699	▲ALTER 3 m 3 m 23 m 23 m 33 m 33 m 53 m 2 h 23 m	1715. Dirk Staur Mess atterg stellt 24 03 2014 FW V Welden stell grade Coll Grad Calmenta Hinter (1) - Markal (asklang) (25.31 KW Coll States & Const. (19.45 Coll State) Coll States (19	PV, SNA Leiktelle PV, GGH PV, ALR PV, RCN PV, MCBK PV, FIL		
-	***	CM# 13106707 13106706 13106706 13106703 13106703 13106703 13106699 13106666 13106666	▲ALTER 3 m 3 m 3 m 23 m 33 m 33 m 53 m 2 h 23 m 2 h 23 m	1916. Mich. Spark Neural string stress 23:00 (2010) P(V) (Rhody of an park Share and P (Share Share	PV_SNA Labstelle PV_GCH PV_ALR PV_MCH PV_MCGH PV_MCGH PV_102 PV_9NL PV_DL	Inveter	
-	· · · · · · · · · · · · · · · · · · ·	Chie 1300707 13108706 13108706 13108700 13108702 13108702 13108699 13108666 13108666 13108671	▲ ALTER 3 m 3 m 3 m 3 m 33 m 33 m 33 m 53 m 2 h 23 m 2 h 23 m 4 h 13 m	1995. Mith Royal Norse shing Solar 23 (20 (201) 1996) Solar Solar Solar 1999) Color Marcine Solar Solar Mithews All Arman March (201) Alladia (salatage) (201) SIN High Reads (201) Solar Solar Solar Solar Solar High Reads (201) Solar Solar Solar Solar Solar 2010 Solar Solar Solar Solar Solar Solar Solar Solar Solar Allan tell Reads Plancia Carport Allan tell Reads Plancia Carport Allan Solar Solar Solar Solar Solar Solar Mith Color Solar Solar Solar Solar Mith Color Solar Solar Solar Solar 1990 - Population - Allan Yolar Solar 1990 - Population - Allan Yolar Solar 1990 - Solar Solar Solar	PV-SNA Labititie PV-GCH PV-AR PV-RCN PV-SNC PV-SNC PV-SNL PV-DV PV-DV	Inveter	
	***	Chie 1300707 13101706 13101706 13100705 13100702 13100701 13100699 13100696 13100695 13100605 13100605	▲ ALTER 3 m 3 m 23 m 23 m 23 m 53 m 2 h 23 m 2 h 23 m 4 h 13 m	1916. Dis Alguer Neu aling Static 32 (02) 2016 PA: 1994 Annuel Annuel Annuel Ali 20 (02) Colis Carde Glannines many table 32 (03) 2010 Colis Carde Glannines many table 32 (03) 2010 Colis Carde Glannines (04) 2010 Annuel Annuel Annuel Colis Carde Carden Glannines (14) 2010 Colis Carden Glannines (14) 2010	PV 184A Lahalile PV-QDP PV-ARR PV-18C3R PV-105 PV-1940 PV-1940 PV-1940 PV-1940	Inveter	
-	***	Ohie 1300707 13108706 13108706 13108702 13108702 13108702 1300659 13108671 13108665 13108651 13108654	AALTER 3 m 3 m 2 2 m 33 m 33 m 33 m 32 h 2 h 2 h 2 h 2 m 4 h 13 m 6 h 3 m 6 h 3 m	1916. 1926 Agen Free asting client 3: 2012 2019 1921 (Theod and park March Aller and and park March Aller and Aller and Aller and Aller and ECIS Reads & Classifier 397: 565 (2) around 1922 (Statistical Statistical park at align Aller and Free and Aller and Aller and Aller and Aller and Free and Aller and Aller and Aller and Aller and Free and Aller and Aller and Aller and Aller and Free and Aller and Aller and Aller and Aller and Free and Aller and Aller and Aller and Aller and Free and Aller and Aller and Aller and Aller and Free and Aller and Aller and Aller and Aller and Free and Aller	PV 5NA Laksifa PV 404 PV 404 PV 504 PV 505 PV 505 PV 505 PV 505 PV 505 PV 500 PV 500 PV 500	Invetter Invetter	
	***	Oble 13906707 13908707 13908706 13908700 13908700 13908700 13908695 13908695 13908695 1390865 1390865 13908654 13908654	▲ ALTER 3 m 3 m 23 m 23 m 23 m 53 m 2 h 23 m 2 h 23 m 4 h 13 m	1916. Dis Alguer Neu aling Static 32 (02) 2016 PA: 1994 Annuel Annuel Annuel Ali 20 (02) Colis Carde Glannines many table 32 (03) 2010 Colis Carde Glannines many table 32 (03) 2010 Colis Carde Glannines (04) 2010 Annuel Annuel Annuel Colis Carde Carden Glannines (14) 2010 Colis Carden Glannines (14) 2010	PV 184A Lahalile PV-QDP PV-ARR PV-18C3R PV-105 PV-1940 PV-1940 PV-1940 PV-1940	Invetter Invetter	

Fech. Plant Managemen

Monitoring



Methods, Tools and Training

(PV Diagnosis by PV Nurses and PV Doctors)



wards a shall the first and a same for a shall be

Workshop in Chennai (29.11.2018)



PV Nurses and Doctors AMC Platform



8



Monitoring the performance of the plant



PV nurses

PV Doctors at site



PV Tool Kit



Hardware







Training

Services of PV Nurses



Customer name TATA Bangalore

PV Nurse (Tamil Mozhi)find and inform the issue to TATA for acknowledging the PV Doctor (Jayaraman)services

PV Nurse Make reports





Site at Hyderabad







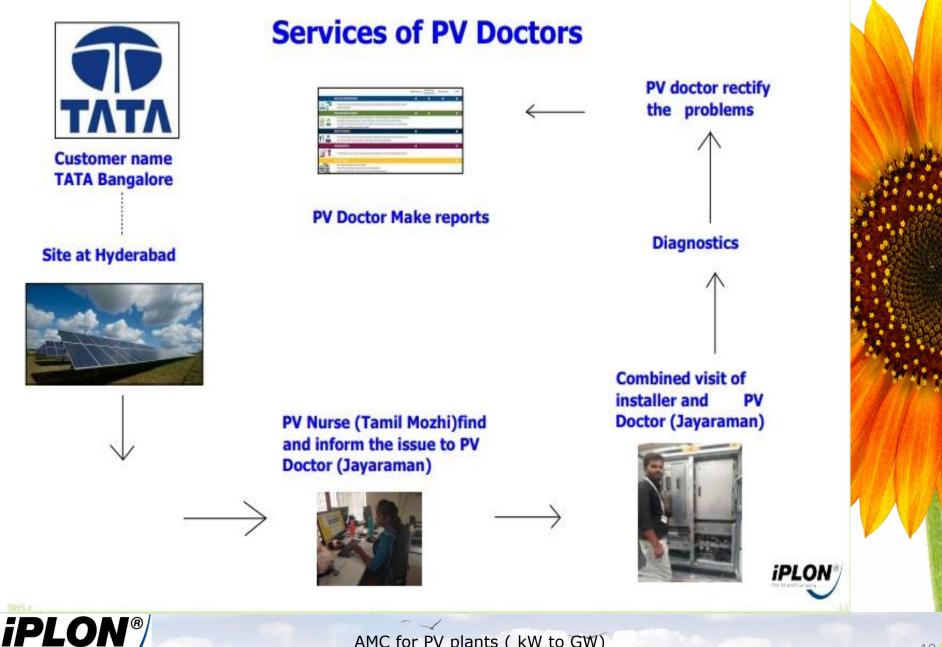
iPLON PV Nurse(Tamil Mozhi)find the issue remotely







AMC for PV plants (kW to GW)



AMC for PV plants (kW to GW)

A de a devenir a conservation de la casa de la conservation de servation de la conservation de la conservation

The Infranet Company

10

PV Doctors already in role-at site, Communication Testing, Signal convertor, oscilloscope etc)



iPL

The Infranet Company

)N®/

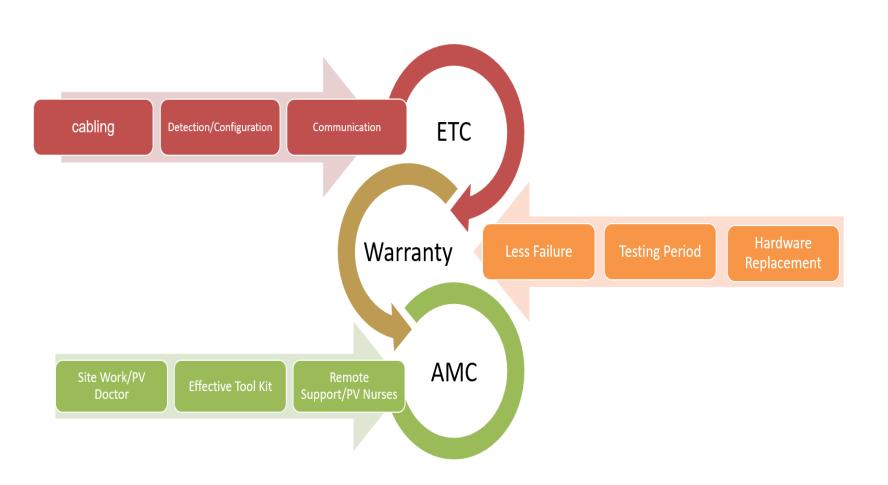


Solar-Log[™]-iPLON(Ip-Log) Knowledge Building Centre-As Basis For Good AMC practice for PV Plants



Ip-Log Academy







Webinar Schedule?

- Module-1 Basics Of monitoring And Introduction to Solar-Log Hardware (Jan 17-2019)
- Module-2 Installation Steps, Cabling Issues with case studies. (Jan 31-2019)
- Module-3- Device Detection, Configuration, Establishing connection. (Feb 15-2019)
- Module-4 Introduction to Solar-Log Web Enerest.(Feb 28-2019)
- Module-5 Solar-Log As O&M Tool(Premium)
- Module-6 Zero Export And Energy Management with Solar-Log (Premium)

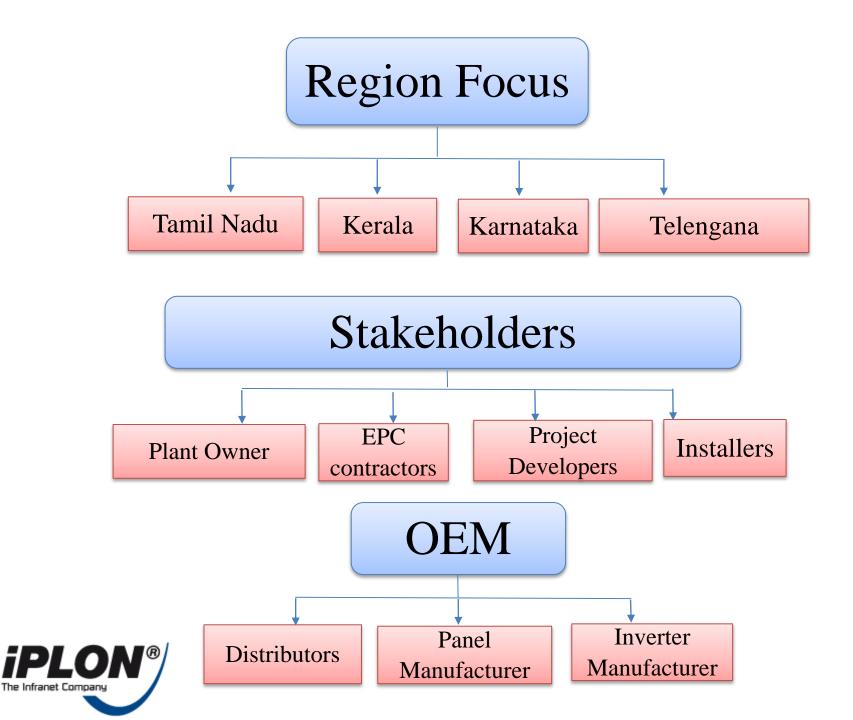


Learn journ bile at ann, constraint adjuscing ell. Init ell'augier, anella el sein al anna reputa sonerola aca. Sel placata tarege consilis, langendras rept facilita lagres, d'annarges acaestas reita.



designed by @ freepik.com





PV Market Segment



KW to GW Scale PV



Training and workshop





Training and workshop









Training and workshop







Training and Workshop







Training and Workshop



AMC is the future !

Why Solar-Log and iPLON together?

Solar-Log : Portfolio with 12 GW and iPLON's experience in the Local Indian market – Innovative companies – make sense to cooperate!

- iPLON Academy!! (PV DG training etc)
- Multi domain skill set (field, embedded, web and solar engineers)
- Lesson learnt in the last 6 years
- analogy 1 : comparison Germany and Tamilnadu (5000 companies) More opportunities! More projects! And hence More maintenance issues (we need PV Doctors!)
- analogy 2: bike/car repair shops (infra for mobility) : similarly we need infra for PV plants (we need PV doctors!)



Sun Power Corporation – 1st Certified PV Doctor!

- 700 sites for Tata in India (AMC for 20 years)
- 63 sites in Tamil Nadu
- First PV Doctor Sun Power Corporation- already trained and certified.



Knowledge is Wisdom!

- Hands-on technical workshop
- Webinars bi monthly (Vinayak will follow the details later)
- Working closely with Gandhigram university (job-placement service for renewable energy graduates!! – "campus

interview" / iPLON Academy)



Thank You!

www.iplon.de

www.youtube.com/user/iPLONChann

el