

The Langeland AED project – FirstAED

Incorporates emergency dispatch, GPS technology, first responders with distinct roles, smartphones and AED network

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Background – the Langeland Island

- Part of the peripheral Denmark.
- ~ 13,000 inhabitants.
- Long distances to the nearest hospital (55 km).
- Long ambulance response times (50 % ≥ 15 minutes, 25 % ≥ 20 minutes).
- Bystander CPR provided by 210 trained first responders.
- 92 AED's purchased by the population.
- All AED's available around the clock.
- General "first responder" response times (8-10 minutes).

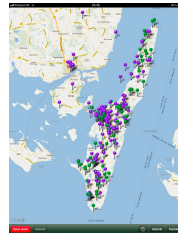


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Action: Emergency call

Dispatch Center iPad – GPS tracking

- All first responders (n= 210 (purple pushpins)) (GPS-tracking)
- AED's (n= 92 (green pushpins))
- Emergency Call Activate iPad – GPS Tracking



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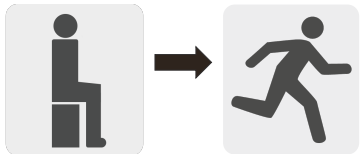
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Key results of the first 12 months – Cardiac Arrest Call

- 5 Cardiac arrests
 - 2 survived, 1 survived more than 30 days.
- 3 Respiratory insufficiency
 - 2 survived more than 30 days.
 - 1 dies at the hospitalet.
- 2 Hangings
 - 1 survived more than 30 days.
 - 1 dies.
- 2 Syncopes
 - 2 survived, AED monitoring (sinus bradycardia).

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FirstAED activate trained volunteer first responders

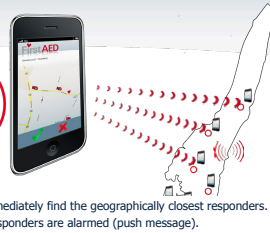


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Action: GPS tracking

Emergency Call Dispatch Center

- GPS tracking will immediately find the geographically closest responders.
- The 9 closest first responders are alarmed (push message).
- The 3 most optimally located first responders are organized in a team.
 - First responder no. 1 and no. 3 hurry to the emergency place (GPS advice)
 - First responder no. 2 collects the AED (GPS advice)
- The IT-system activate the AED cabinets (unlock, sound & flash light).



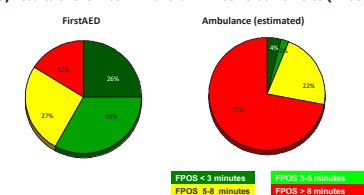
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Key results of the first 12 months : Alarm type

Alarm type	Number	Percentage
Disease	243	~ 76 %
Traffic accident/ fire	17	~ 5 %
Accident	33	~ 11 %
Cardiac Arrest	15	~ 5 %
Others	10	~ 3 %
Total	318	

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Key results of the first 12 months – First Person On Site (FPOS)



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Methods:

- An IT-system combining ideas from the AED center and modern information and communication technology (FirstAED app).
- All first responders are provided with a rescuer smartphone (iPhone 4S/5).
- An auxiliary to the public services.
- FirstAED organizes the three first responders in a team with distinct roles.
- The IT-system activate the AED cabinets (unlock, sound & flash light).



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Key results of the first 12 months – 318 alarms

- 3 first responders On Site in 90 % of the cases.
- Arrival before ambulances in 89 % of the cases.
- Median time to First Person On Site (FPOS) time = 263 seconds = 4 minutes and 23 seconds.
- Median time to AED On Site time = 372 seconds = 6 minutes and 12 seconds.
- Estimated median time to Ambulance On Site time = 714 seconds = 11 minutes and 54 seconds.

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Perspectives: FirstAED

- The Langeland AED project developed the FirstAED in the hope to get shorter response times.
- The FirstAED GPS app technology entails a significant reduction in first responder median response times from more than 8 minutes before to 4 minutes 23 seconds after.
- FirstAED organizes the three first responders in a team with distinct roles.
- FirstAED activate the AED cabinets (unlock, sound & flash light).