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The Engineering City Journal

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The purpose of the Journal is to disseminate knowledge, experience, and best practice in engineering & manufacturing.
The articles are written by practicing professionals in the Engineering City (EC). They cover issues relevant to their projects, operations, and organizations.
The articles address the challenges of the time. As such, the Journal is also a chronicle of the evolution of the EC, its companies, and its individuals.
It is the aim of the Journal to advance the engineering & manufacturing practice, to enrich the engineering & manufacturing community, and to contribute to the worldwide discourse in engineering & manufacturing.

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New Product Corner

. The YEAE Develops New Automotive ADAS-HIL Systems

by Rama, EA

This was a world-class project. As though it was the project of the century. A project that lasted 9 months, a project that engaged an engineering team of 10 people, and a manufacturing team of 10.

Four large systems with complicated and interdependent technical requirements were developed in parallel:

. ADAS-ECU-HIL
. Autonomous Driving ECU-HIL
. Radar Target Simulator
. Camera HIL

It was a master class in systems engineering, in project management, in engineering ingenuity, and in manufacturing proficiency. It was a master class in team coordination and communication, a master class in overcoming numberless challenges, and a master class in documentation.

Many articles will come out of this project and many lessons learned will be shared. There were many new discoveries made, many new technologies developed, many new technological frontiers crossed, and many new organizational methods applied.

But more importantly, the team has re-created itself. This is now a different team. They have done much together over the last 9 months. They have seen much, they have solved much, they have overcome much. And they did it all together. This is now a fearless team that can overcome any challenge.

Before the articles start coming in, I wanted to share two pictures from this dream team.



Pic. The ADAS-HIL Engineering Team

Standing from right to left: Nelli Harutyunyan, Harutyun Hambarcumyan, Davit Tarverdyan, Gurgen Mardoyan (Director of Engineering), Shant Halajian, Davit K. Sargsyan, Tigran Manukyan (Systems Engineer), Vigen Hovhannisyan (BDM), Ralph Donabedian, Susanna Tadevosyan, Hrachya Pogosov (Project Manager), Armen Harutyunyan, Armen Arustamyan.

Sitting from right to left: Mikayel Gabrielov, Artavazd Hovhannisyan, Artem Hovhannisyan, Levon Niazyan, Vahe Israelyan, Gagik Harutyunyan, Vahan Poghosyan.



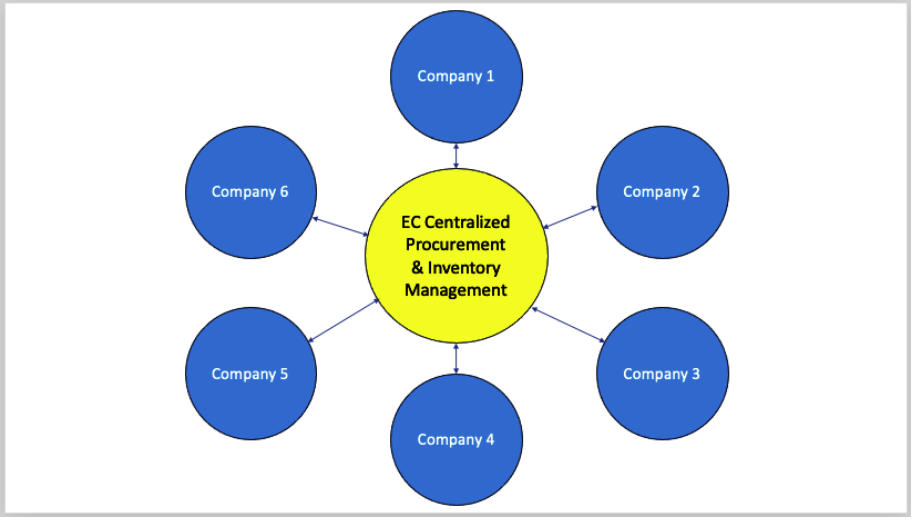
Pic. The ADAS-HIL Manufacturing Team

From left to right: Gurgen Mardoyan , Arsen Petrosyan, Levon Zakaryan, Armen Arustamyan, Artem Hovhannisyan, Aram Ghukasyan (Director of Manufacturing), Ralph Donabedian, Vahan Poghosyan, Gagik Harutyunyan, Tigran Manukyan.

Engineering City Corner

. Envisioning a Centralized Procurement & Inventory Office in the EC

by Rama, EA



Procurement management, inventory management, and warehousing are things of engineering companies and manufacturing operations.

Like any other process, all these three processes are subject to optimization, cost reduction, and risk mitigation. All three processes have an immediate effect on the speed, quality, and cost of engineering and manufacturing.

With the supply chain disruptions, component shortages, and global macro threats, the procurement specialist's role becomes fundamental to the success of any engineering and manufacturing operation.

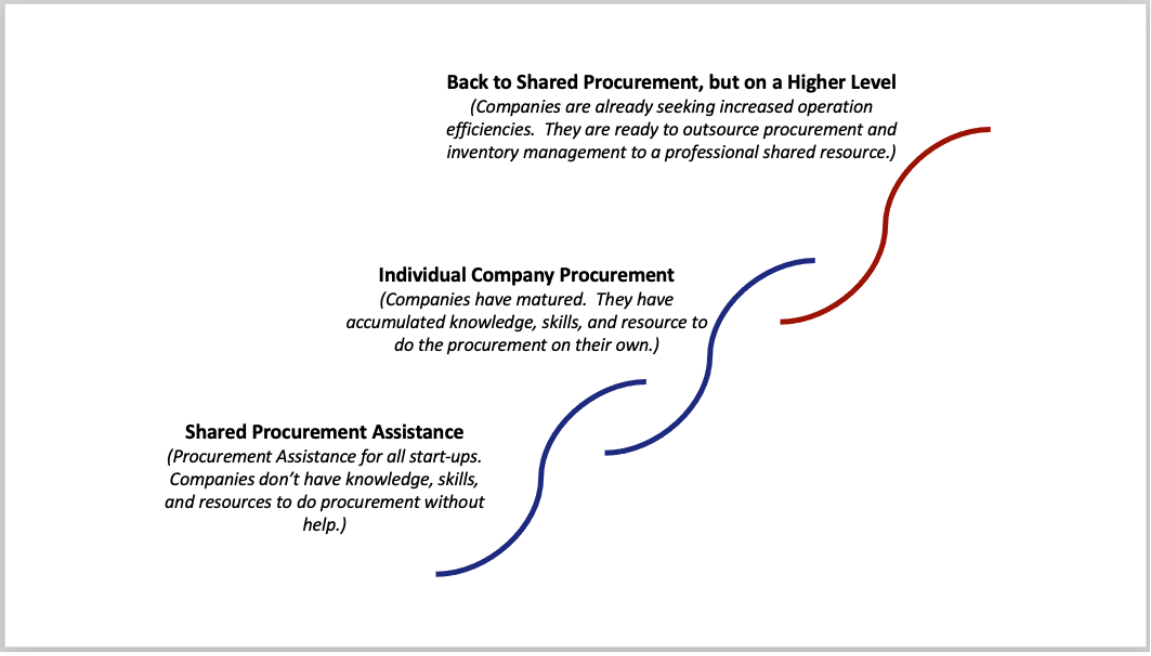
The Procurement Specialist must have supplier knowledge, good relationship building skills with suppliers, good negotiation skills, and good routing & shipping logistic knowhow. All this to secure an uninterrupted quantity, quality, and cost reduction.

Doing procurement as a side task is no longer sufficient. The absence of such fully dedicated specialists in our companies is causing unnecessary delays, mistakes, and cost. But not every company can afford to keep a professional procurement specialist on their staff.

In a recent meeting of company directors, the idea came up to have a shared procurement specialist. The benefits are clear – a dedicated professional that will secure speed, avoidance of costly mistakes, and optimization. In such a scheme, the cost of having such a specialist will be shared by all companies. This will assure a higher level of efficiency for the resident companies, which by itself is a competitive advantage for the companies.

And with a shared procurement, another thing may happen, a thing as powerful if not more – a shared inventory and warehousing. Most companies procure more than they need or often procure wrong or trial components. The result of which, components end up sitting idly in their warehouses. If we succeed with the shared procurement specialist, then we can also have a shared inventory to which all companies will have access. With time, we may end up having our own DIGIKEY-type of a warehouse in the EC.

From an evolutionary point of view, we are speaking about the third S-Curve.



Pic. The Procurement S-Curves

From an organizational point of view, perhaps the Engineering Association can take on such a responsibility. And this will be one more benefit of the Engineering City to the resident companies, where many functions could be shared by all residents.

Arts & Engineering Corner

. Poetic Expression of Leadership - Մարդ ել գա, մարդե ել

by Rama, EA



The best definition of leadership was given by Paruyr Sevak:

Մարդ ել գա, մարդե ել

Մարդ կա՝ աշխարհն է շալակած տանում,
Մարդ կա՝ ելել է շալակն աշխարհի...

This is leadership in a nutshell.

Leadership is really a choice. Which one of the two do we want to be? The one is easy, the other is difficult; the one is safe, the other is risky; the one is comfortable, the other is torturous; the one requires just work, the other requires will power and courage; the one is a receiver, the other is a giver; the one leads to mediocrity, the other leads to significance; the one just needs instructions, the other needs a philosophy.

Մարդ կա՝ աշխարհն է շալակած տանում,
Մարդ կա՝ ելել է շալակն աշխարհի...

Leadership is a philosophy of life.
It is about how we want to live our lives,
And it is also about how we want to leave this life.

Leadership is a choice that we make.
It is not about management, nor a position,
It is not a job, nor a title.
No one will tell us to take leadership,
No one will pay us for taking leadership,
No one will blame us for not taking leadership.

Leadership is a deal between us and our inner selves,
It is about envisioning and taking action,
It is about taking initiative and making happen,
It is about wanting to change something to the better that will benefit all.

And this would be leadership in a nutshell.

Մարդ կա՝ աշխարհն է շալակած տանում,
Մարդ կա՝ ելել է շալակն աշխարհի...

Announcement Corner

. Armenia Engineering Week in two Weeks – November 24 - 26



If you want to showcase your products, or want to give a presentation, or participate in any shape or form at the Armenia Engineering Week, then please send to info@engineeringcity.am.

. Convergence India Expo – January 17 – 19, 2024



If you want to participate in the Armenian booth at the Convergence India Expo, then please send to info@engineeringcity.am.

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To submit articles, please send to info@engineeringcity.am. Articles can be in any language.
