



Environmental Management System

Integrating Safety and Security into the EMS Life Cycle: A Body Contact Sport

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Why Integrate Environment, Safety & Security

- DOE Order 450.1-4 requires sites to have an EMS *and* integrate the EMS with ISMS
- Internal and external audits indicate that integration is not systematic
 - Document hierarchies consistent but workers see safety, security & environment as separate systems
- Opportunities exist to leverage safety, security and environmental programs for mutual benefit
- Streamlining multiple requirements eases the burden on all systems

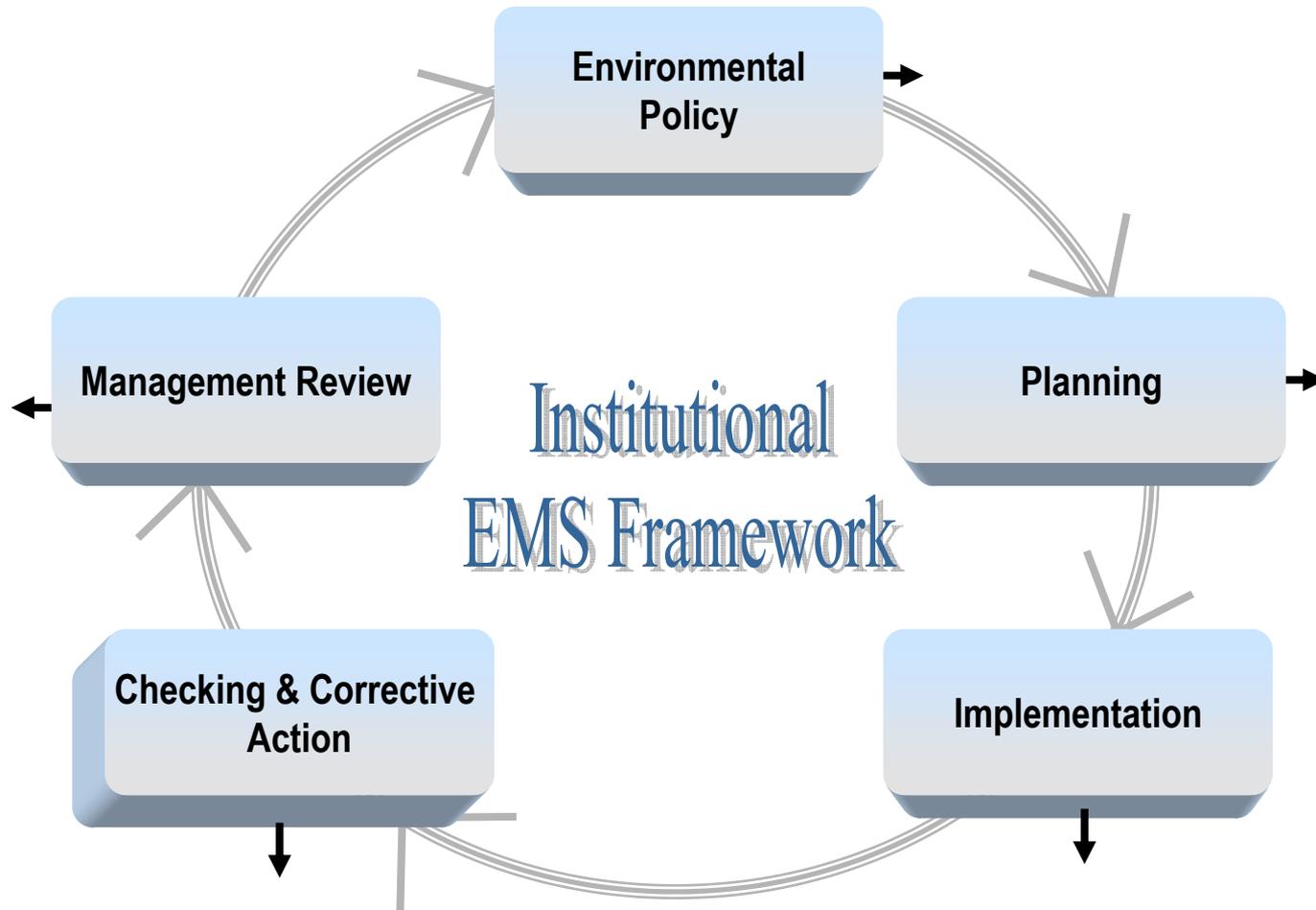
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LANL EMS Approach

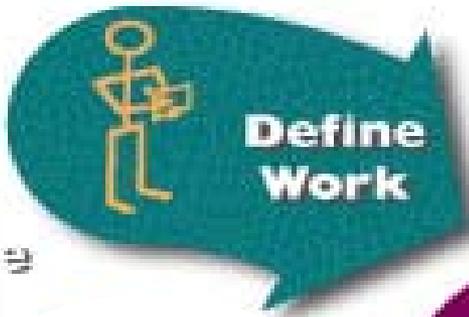
- Bottoms-up design with Senior Mgmt Support
- Used the LANL culture
 - Engaged Divisions with most environmental issues to form Core Team
 - 43 people, 15 Divisions on initial team
 - ISO 14001 certification training for Core Team
 - ISO 14001 Audit training for Core Team
 - Listened to and incorporated feedback
- ISO 14001:2004 Used as Standard
- Integration with safety, security and other Lab programs from the inception

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1. Identify work activities that interact with the environment



2. Identify environmental impacts



3. Develop controls to prevent significant environmental impacts



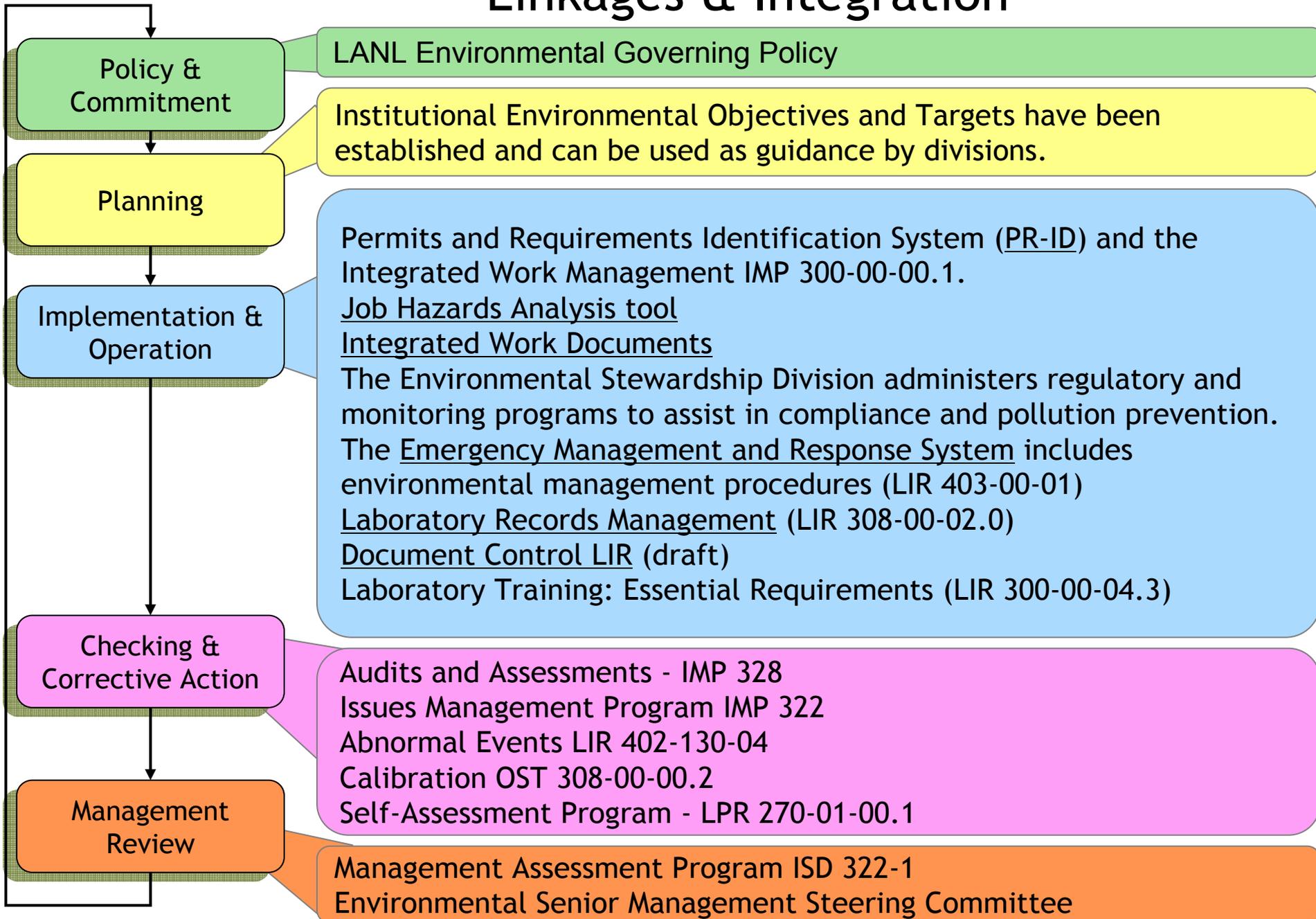
4. Do the work according to procedures (e.g. environment, security, safety, etc).



5. Feedback & improvement



Linkages & Integration





One Work Message Built into Communications Tools

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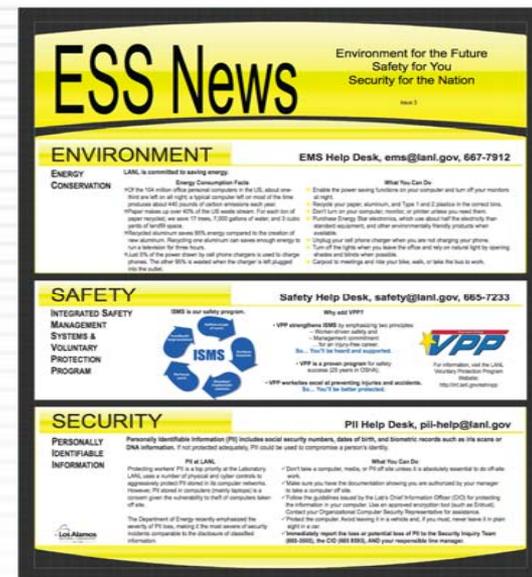
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- No separate work control system for environment
 - Built SME process into Job Hazard Analysis tool
 - Audits finding little worker use without requirement
 - Upgraded PR-ID tool and made use a requirement for new and modified work (IPP 400.1)
 - Includes security and engineering checks
- Lab-wide EMS environmental awareness training includes specific safety and security messages
- Joint awareness campaign
 - Environment, Safety & Security Posters
 - LINKS messages
- Inclusion in Lessons Learned Program overhaul
 - Prevention as a Lesson Learned



- Chemical Management System support
 - Life Cycle Chemical Management initiative
 - Environmental High Risk Chemicals/Alternative Project
 - 80%+ recycle rate on surplus chemicals for inventory PBI
 - “Canned Air” Campaign with IH and ASM
- Safety and Security criteria included in P2 and GSAF Projects
 - Beryllium part replacement
 - Hydrodynamic test beryllium containment system improvement
 - TA-55 casting systems
 - Dissolvable Personal Protective Equipment with Rad Protection
 - Secure paper recycle

ESS News

Environment for the Future
 Safety for You
 Security for the Nation
Issue 2, Summer 2007

ENVIRONMENT

EMS Help Desk, cleanitout@lanl.gov, 667-7912

CANNED AIR

Some products used at the Laboratory take on a complexity that might not be present were the same thing used in the privacy of your home. “Canned air” is one example. “Canned air” is intended to create a stable- and moisture-free spray, which is crucial for tasks such as internal cleaning of parts during electronic assembly and mirror polishing.

One can provides just four cleanings. Further, “canned air” is not air but a cryogen.

The life and financial cycle for a single can of air at the Lab

- Canned air purchased at \$23, bottled, and entered into ChemLog
- Canned air used to clean keyboards approximately four times
- Container owner schedules a waste management pick-up. Waste recharge fee: \$7
- Waste services personnel pick up the can. \$100 per person (they are required to wear safety goggles and skin covering when using “canned air”). Each empty can must be treated as hazardous waste. If you need to clean your keyboard, try one of these environmentally and budget wise solutions:
- A lint free cloth
- Cotton swabs
- An Underwriters Laboratories (UL) approved Electric Duster or Dablic (\$19 to \$70)

Do the math. Be environmentally friendly.

Did you know that most “canned air” at the Lab is used to clean keyboards?

The Department of Transportation (DOT) and the Environmental Protection Agency (EPA) classify “canned air” as an explosive hazard and a refrigerant. DOT and EPA recommend wearing chemical goggles and skin covering when using “canned air”. Each empty can must be treated as hazardous waste. If you need to clean your keyboard, try one of these environmentally and budget wise solutions:

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So
Canned air: \$23
Disposal of canned air container – \$18
Total – \$41

Not using canned air. Priorities—for you, your group, the Lab, and taxpayers

SAFETY

Safety Help Desk, safety@lanl.gov, 665-7233

SAFE DRIVING

During your commute to and from the Laboratory, if you are a conscientious driver who obeys the speed limit and pays attention, keep it up. If you are among those who are in too much hurry to get to work or simply enjoy the adrenaline-pumping challenge of getting to your destination in as little time as possible, keep reading.

4 “Problems” & Solutions

- ⚡ **Speeding** Drive the same speed or slower than surrounding traffic.
- 🧠 **Driving while drowsy** Drive rested and alert. If you feel fatigued, pull off the road until you are more awake.
- 👁️ **Not paying attention** Keep your eyes and attention on the road. If something diverts your attention for more than two seconds, stop it.
- 🏎️ **Aggressive driving** Brake, don't show anger, and be kind to other drivers, even if they're not kind to you.

These four problems are the greatest contributors to accidents.

Improve Your Driving... Improve Your Life!

During your commute to and from the Laboratory, if you are a conscientious driver who obeys the speed limit and pays attention, keep it up. If you are among those who are in too much hurry to get to work or simply enjoy the adrenaline-pumping challenge of getting to your destination in as little time as possible, keep reading.



SECURITY

Security Help Desk, security@lanl.gov, 665-2002

UNAUTHORIZED DISCLOSURE

Unauthorized disclosure of classified information can threaten national security given the nature of Laboratory work. It has resulted in a number of security incidents resulting from potential disclosure of information via email or improper document handling, which can be prevented by heeding these reminders:

Emailing

Workers must ensure email they send does not contain classified information.

- If unsure about the classification of an email, contact an Authorized Derivative Classifier (ADC) or the Classification Group (SAFE-S) for guidance.
- If you are going on vacation or working off-site, do not auto-forward your work email to another email account.
- Always stop and think before you hit the SEND button.

Protect your work. Be security smart.

Document Disposition

The recent overhaul of the Lab's mixed office paper recycling program no longer requires workers to separate mixed paper from white. However, workers still must ensure the following documents do not end up recycling bins:

- Classified Information;
- Unclassified Controlled Information (UCI), which includes Official Use Only (OUO) and Uncontrolled Classified Nuclear Information (UCNI); and
- Proprietary Information (PI).

Handle classified, UCI, and PI correctly by:

- Shredding or
- Sealing in burn boxes (available through Just in Time)

For accountable classified documents, work with your classified matter custodian.

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- Equipment and Materials Disposition Program
 - Problem crosses institutional lines
 - Safety, security, procurement, HR, waste disposition, salvage, etc.
 - Working group reflects these interests
 - Toolkit approach condenses lessons learned for field use
 - Now addressing root causes
 - Departure process
- Using LANL Mirror (Lessons Learned) to highlight underlying problems

Environment - Safety - Security

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ENVIRONMENT FOR THE FUTURE, SAFETY FOR YOU, SECURITY FOR THE NATION

ENVIRONMENT CLEAN IT OUT

EMD Help Desk (505) 667-7912
cleanitout@lanl.gov

If you are vacating an old space, moving into a new space, or trying to get a handle on the "stuff" you own, you need to understand any environmental, safety, and security hazards that might be present. The Equipment and Materials Disposition (EMD) Team is here to help. The EMD Team can assist you with:

- Area walkarounds to determine clean-out needs and potential environmental, safety, and security issues
- Information about how to disposition, reuse, or recycle unwanted items, including:
 - ✓ Furniture
 - ✓ Office equipment
 - ✓ Other bar-coded and non-bar-coded equipment
 - ✓ Records, media, and archives
 - ✓ Space
 - ✓ Waste
 - ✓ Laboratory, industrial, and secondary chemicals
 - ✓ Other materials
- Processes required to vacate space properly
- Limiting new "stuff" from filling up cleaned-out spaces

Avoid leaving behind a legacy of unwanted items. Take responsibility for what you own. Be an environmental steward.

SAFETY GIVE YOURSELF A BREAK

Taking a break means that you're a dedicated employee—dedicated to taking care of yourself.

The human body was NOT designed to stay in one position, or perform tiny, detailed movements (such as typing) for long periods of time. *It's unnatural!*

So protect yourself and your work...*take a break!*

- **Eye breaks** — Every 20 minutes, take a minute to rest your eyes. Look at something 20 feet away. Blink your eyes rapidly for a few seconds.
- **Micro breaks** — Take a break between periods of intense activity. Rest your hands in your lap for one to two minutes. Briefly stretch, stand up, move around.
- **Rest breaks** — Take a brief rest break every 30-60 minutes. Stand up, move around, and do something else.
- **Exercise breaks** — Stretch and do gentle exercises every one to two hours.
- **Mental health breaks** — Take a break whenever you feel overly stressed out. Go for a walk, talk to some friends, "chill," breathe.

Safety Help Desk (505) 665-7233
safety@lanl.gov

SECURITY STOP WORK

Just as workers at the Laboratory have the authority to stop work if they discover that others are exposed to conditions of imminent danger or other safety hazards, workers may also stop work if they discover a security risk that may result in a violation of security policy.

Make sure you understand the security risks and requirements of your task.

Stopping Your Own Work

If you identify a security risk, stop work and take action. You may correct the problem without first notifying your supervisor if

- the problem does not pose an immediate security risk; and
- you can correct the problem immediately.

Looking Out for Each Other

If another worker raises a security concern about your work,

- stop the work immediately;
- if there is no imminent security risk, explain what you are doing; and
- do not resume work until the concern is resolved.

Management Responsibilities

Whether it is related to safety or security, the responsible division director, the responsible division director, program director, or office director must document all stop-work actions and authorize restart.

The Laboratory prohibits retaliation against workers for stopping work because of safety and security concerns.

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Security Help Desk (505) 665-2002
security@lanl.gov



EMS Integration Actions

- Both Environment and VPP doing the Lab Picnic circuit
 - Awareness
 - Tools
- Sustainability Program for LANL Summer Students
 - Focus on bringing safety, security and environmental protection as basic job functions
- Work Planner Training
 - Prevention during work planning
 - Environment & Security so far but ripe for safety



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Next Steps

- EMS moving to 08 process with continued worker level involvement
- Organizations including EMS in Worker Safety & Security Team process but need to make more systematic
- WSST Environmental sub-committee established
- Joint response to HSS Audit findings
- Joint sponsorship of Lab-wide improvement initiatives:
 - Equipment and Materials Disposition Kaizen
 - Hazardous Materials Management Kaizen
 - Chemical Life Cycle Six Sigma Project
- ISM engagement - add this to view of ISM world

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